Watershed Permitting Guidance

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APPROVED:

Susan L Sylvester
Susan L. Sylvester, Director
Bureau of Water Quality

09/02/14
Date

Pam Biersach
Pam Biersach, Director
Bureau of Watershed Management

09/05/14
Date

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Abbreviations/Acronyms

AWQMP	Areawide Water Quality Management Plan
AM	Adaptive Management
CAFO	Concentrated Animal Feeding Operation
CSO	Combined Sewer Overflow
eDMR	Electronic Discharge Monitoring Report
EPA	United States Environmental Protection Agency
LA	Load Allocation
MS4	Municipal Separate Storm Sewer System
PMT	Policy Management Team
POTW	Publicly Owned Treatment Works
SWAMP	System for Wastewater Applications, Monitoring and Permits
TBEL	Technology-Based Effluent Limitation
TMDL	Total Maximum Daily Load
WDNR	Wisconsin Department of Natural Resources
WLA	Wasteload Allocation
WPDES	Wisconsin Pollution Discharge Elimination System
WQBEL	Water Quality-Based Effluent Limitation

I. Introduction

The purpose of this document is to inform Wisconsin Department of Natural Resources (WDNR) staff and others about watershed permitting, with an emphasis on the potential use of this process to facilitate implementation of total maximum daily loads (TMDLs), water quality trading, adaptive management, or other large-scale projects. This document relies on case studies, United States Environmental Protection Agency (EPA) guidance, and other reference material to highlight the pros and cons of watershed permitting and provides advice on how to successfully implement various watershed permitting types in Wisconsin. This guidance will be updated as the WDNR learns more about the watershed permitting process, permit types, or as other program needs dictate.

In the following guidance, "watershed" is used to describe the area being covered by the proposed permit, however, this process could cover multiple watersheds, a sub-watershed, a county, a TMDL reach, or any other area. Theoretically, it could be used to address any surface water or groundwater quality concern; even addressing similar facilities not necessarily in the same geographic area. "Watershed permitting" describes the process used to address more than one point source, in addition to or instead of simply permitting each permittee on a discharge-by-discharge basis. There are different ways and permit types, that can be used to accomplish watershed permitting, including: permit synchronization (see page 4), group permits (see page 5), areawide water quality management plan (AWQMP) amendments (see page 9), or a single-entity permit (see page 8). Watershed permitting could describe a shared permitting process that covers two permittees or 50 permittees, depending on the needs and goals of the area and pollutant(s) being covered.

Watershed Permitting is a ***process*** that may be used to address more than one point source within a given area, in addition to or instead of permitting each permittee on a discharge-by-discharge basis.

Different tools can be used to carry out watershed permitting, including:

- *Permit Synchronization* – Individual permits are reissued, modified, or revoked/reissued concurrently in order to synchronize activities. Permittees still only receive one individual permit, but all share similar requirements for the pollutant(s) of concern.
- *Group Permits* – Multiple permittees are assigned to one permit with requirements addressing the pollutant(s) of concern. This permit is often issued in addition to individual permits for each of the covered permittees.
- *Areawide Water Quality Management Plan Amendment* – An amendment is done that dictates requirements for point sources in the area. Permits are reissued as usual, but must be consistent with the AWQMP.
- *Single-Entity Permits* - One permit is written to cover all sources (e.g., wastewater, stormwater, CSOs) previously covered by separate permits. It is issued to one owner or operator that assumes responsibility for compliance with all of the discharge locations and diverse program requirements covered by the permit.

The watershed permitting tool that should be used in a given situation will vary, depending on the characteristics of the area and the sources of pollution impacting it. For example, in a highly urbanized area the best option might be a group permit for municipal separate storm sewer system (MS4s), if stormwater is the most significant contributor of the pollutant of concern in that area. A highly urbanized area might also be covered by a single-entity permit (see page 8) that covers all of the stormwater, wastewater, and combined sewer overflow (CSO) discharges in that community. On the other hand, a group permit for wastewater point sources (see page 5) might be more effective in situations where nonpoint sources are also significant contributors, in which case watershed permitting could be desirable in order to synchronize compliance activities and better promote the use of adaptive management and trading. A group wastewater permit could also be used in situations where a group of permittees have already committed to doing adaptive management together, in which case the permit could consolidate planning, monitoring, and reporting requirements for all permittees.

Watershed permitting should be used in situations where it could help the Department and stakeholders spend their resources where they can do the most good for the environment. In most cases, the goal of watershed permitting is to facilitate the implementation of TMDLs, trading, adaptive management, surface water monitoring strategies, source water protection, or other programs. This permitting approach may be especially appropriate in areas with an active watershed organization whose interests could be served or enhanced by watershed permitting. This organization might help bring sources together and increase opportunities to achieve water quality objectives - reaching the same goals for less money, reaching a higher quality for the same money, or getting improvements that might not be possible with a less holistic approach.

The ultimate objective of using watershed permitting is to enhance the environmental and cost-effectiveness of water quality management by providing more options and/or greater flexibility for ways to meet groundwater or surface water quality standards or other watershed goals.

For more information

- *TMDLs: http://dnr.wi.gov/topic/tmdls/*
- *Water Quality Trading: http://dnr.wi.gov/topic/surfacewater/waterqualitytrading.html*
- *Adaptive Management: http://dnr.wi.gov/topic/surfacewater/adaptivemanagement.html*
- *USEPA guidance on watershed permitting: http://cfpub.epa.gov/npdes/wqbasedpermitting/wspermitting.cfm*

II. Watershed Permitting Types

There are several types of watershed permitting that are available and each should be carefully considered before applying or rejecting the watershed permitting concept. Each type has its strengths and weaknesses and some are more appropriate in certain situations than others. For example, the synchronization of permits and group permit options probably work best when there are fewer permittees involved (e.g., a handful of wastewater permittees that want to work under one adaptive management plan, a group of stormwater permittees with shared boundaries that want to work together, two wastewater permittees with a combined outfall or shared treatment system, etc.). These types of watershed permitting can get extremely complicated when addressing a large number of permittees and/or complicated pollution issues, as further discussed in Section V- Workload (p. 15). In cases where it is necessary to address pollution at a larger scale (e.g., basin wide) or with a greater number of permittees (e.g., > 10), the AWQMP amendment option may be a better fit. See Section VI- Scale, p. 16, for further detail. Each type of watershed permitting is described below in more detail, along with some of the benefits and challenges associated with each type.

Synchronizing Individual Permits

Synchronizing the reissuance of individual permits is the watershed permitting approach that is closest to traditional permitting, in that each discharger still receives only one individual Wisconsin Pollution Discharge Elimination System (WPDES) permit. In this option, all individual permits in an area are changed at the same time, in order to invoke similar requirements all at once. For example, individual permit reissuance, modification, or revoke/reissuance is timed so that all permittees in the area are on a similar timeline to achieve compliance with a common pollutant. This type of watershed permitting is most often applied to wastewater discharge permits, so the guidance included in this section is directed primarily at that program. However, synchronization of concentrated animal feeding operation (CAFO) and/or Municipal Separate Storm Sewer System (MS4) permits (with other permittees of the same type or with wastewater discharge permits) might be appropriate in some situations.

In this model the reissuance process takes place pretty much as usual, except that two or more permits share a related set of conditions (e.g., TMDL-based limits for phosphorus) and are issued, reissued, modified, or revoked/reissued at the same time. In these cases, some of the conditions of the synchronized permits may be developed using an areawide analysis (such as a TMDL) rather than being established on a permit-by-permit basis. However, each individual permit still needs to address all relevant state and federal regulations for all pollutants (not just a single pollutant of concern).

The expiration, reissuance, and/or effective dates are synchronized so that related requirements take place in all of the permits at about the same time (some variability may result from differences in individualized compliance schedules). In consideration of workload issues, staff could plan ahead by

making adjustments to coordinate reissuances. For example, shorter-term permits could be reissued, as needed, to match up with other permits in the area. Or reissuance of some expired permits could be delayed when there is only one or two years left until the scheduled watershed permitting date. Alternately, existing permits could be modified to bring their permit requirements in line with proposed schedules at the time of watershed permitting.

It is recommended that permit synchronization be done on a smaller scale whenever possible, such as at the watershed or subwatershed level. For example, when a small number of point sources are mostly responsible for the exceedance of water quality standards, their reissuances could be synchronized to facilitate modeling, monitoring, or compliance tracking needs. Synchronization of permits on a basin wide or larger scale would be a significant workload for permits and compliance staff, and would be especially difficult in areas where there is uneven or inadequate staffing due to position vacancies or other factors, and is probably unnecessary in many cases. If watershed permitting is preferred over a larger area, staff may be better off dividing the area into smaller subwatersheds, for synchronized permitting in succession over a longer period, or using a different watershed permitting type such as the AWQMP amendment option described below.

For an example of synchronized permitting that is being done on a subwatershed-by-subwatershed basis, over a large TMDL area, see Appendix 1, “Synchronized Permitting in the Rock River Basin”. For an example of synchronized permitting that is being considered on a smaller TMDL scale, see Appendix 2, “Proposed Synchronized Permitting in Lake Mallalieu TMDL Area”.

Group Permits

Group permitting (sometimes called “multi-party” permits) involves issuing one permit that covers multiple point sources, usually in the same geographic area. This permit would identify all permittees in an area and the individual specific requirements (for example, technology-based effluent limits, or TBELs, and water quality-based effluent limits or WQBELs) for each permitted source. Permit requirements often apply to one, or sometimes two, parameters that are relevant to water quality in the area of concern. When the group permit is being issued in addition to individual permits, limits and requirements for all other pollutants would still be addressed in each facility’s individual permit. Permit conditions may specify joint or separate responsibility for compliance. This process allows the permitting program to focus effluent limits, monitoring, trading and adaptive management provisions, or other conditions on an areawide basis into a single permit and links the permittees in a way that incorporating conditions into individual permits cannot accomplish.

Group permitting is similar in some ways to the general permitting concept, in that multiple parties are assigned to one permit with the same or similar conditions applied to everyone. However, a group permit applies to a set number of pre-selected facilities and would have to be modified to add any new

dischargers; coverage cannot be conveyed via cover letter as is often done with a general permit. The group permit also provides flexibility to include some facility-specific requirements such as facility-specific water quality-based effluent limits or compliance schedules.

Group permits are not entirely new to Wisconsin. The WDNR has used this permit type in the past for stormwater (MS4) permittees (see "Stormwater Group Permits" below). However, this type of permitting is new to Wisconsin's wastewater program. In fact, issuing more than one permit to a publicly owned treatment works (POTW) was prohibited by statute until 2013, when statutory language was changed by the legislature to allow the application of this permitting type to all point sources (see Act 70: http://docs.legis.wisconsin.gov/2013/related/acts/70).

Wastewater Group Permits. This type of watershed permitting will most often be used in situations where staff want to implement areawide objectives at the same time, without having to reissue every affected permit. For example, rather than have to address phosphorus compliance options in each individual permit, the limits, monitoring, and compliance schedules (including trading and adaptive management options) could be laid out in a group permit. To see example group permit language that encourages permittees to consider phosphorus compliance alternatives at about the same time, see Appendix 8, "Wastewater Group Permit Template", p. 46.

Group permits could be applied in areas with a large, but manageable, number of wastewater point sources or be issued to a smaller group of permittees. This approach to watershed permitting may have the greatest potential for reducing the workload associated with reissuing a large number of permits in order to implement something like a new TMDL or water quality criteria in a particular area. It might best apply where a TMDL, AWQMP, or other plan specifies the levels or timing needed to achieve water quality goals. The plan could identify sources that would be logical to group under a single permit. This permitting type might ease the implementation of adaptive management and trading programs by naming all relevant dischargers, showing their limits in one document, and laying out special conditions relevant to the area for these compliance options.

Group permitting does not have to be limited to areas where an approved TMDL already exists, however. Obviously, adaptive management and trading can occur without an approved TMDL. Other scenarios may exists which call for a group permit, as well. For an example of group permitting that is being proposed for a non-TMDL situation, see Appendix 6, "Proposed Group Permit for Whitewater WWTP & LSP-Whitewater Limited Partnership Combined Outfall", p. 41.

In situations where a group wastewater permit is being issued to address all conditions related to a particular pollutant, it might also be necessary to modify the individual permits for each permittee covered by the group permit. For example, if the group permit is to contain all applicable phosphorus TBELs and WQBELs for a group of permittees, the individual permits that already contain limits for

phosphorus will have to be modified to remove those phosphorus requirements. Although, a single permittee can be covered by more than one discharge permit, those permits would not contain conflicting requirements for the same pollutant.

If it is necessary to simultaneously issue group permits and reissue, modify, or revoke/reissue individual permits for each discharger, it may be desirable to announce these actions in the same public notice. In addition to potentially saving staff time and public noticing expenses for the WDNR, this should make it easier for external stakeholders to be aware of when various steps are taking place and help them to understand how these actions relate to one another.

For an example of group permitting that is being proposed over a large TMDL area, see Appendix 4, "Proposed NCCW Group Permit for the Milwaukee River TMDL Area", p. 36. For an example of group permitting that was done over a smaller TMDL area, see Appendix 5, "Group Permitting of the Green Bay & De Pere POTWs", p. 39.

Stormwater Group Permits. Group permitting of municipal storm water discharges is not new to the stormwater program. In the past, adjoining municipalities that discharge to resources typically within the same 12-digit HUC have been grouped together. Examples include the Upper Fox MS4 Permit Group (WPDES Perimt No. WI-S050105), the Root River MS4 Permit Group (WPDES Permit No. WI-S050059), the North Shore Group (WPDES Permit No. WI-S061565), and the MS4 permit group in Dane County, including UW-Madison, (WPDES permit No. WI-S058416). These group permits all share a similar structure where each municipality is identified as a co-permittee. The co-permittees all have their own individual responsibility to comply with the permit conditions, but cooperation amongst the co-permittees is encouraged. The main purpose of the group MS4 permitting approach to date has been to establish consistency in regulating MS4 discharges across a watershed area. The conditions under these permits apply to all MS4 discharges across the entire political boundary of the municipality.

Going one step beyond the group permitting approach, is writing in specific permit conditions where cooperation and joint compliance is required. This has been done for the Menomonee River Watershed-Based MS4 Permit through a part of the illicit discharge detection and elimination program. Through requiring implementation of watershed-based projects, the co-permittees are all responsible for completing a project that is designed to target a specific pollution problem in the Menomonee River Watershed. The project itself does not need to be within the political boundary of the municipality for the municipality to take credit. Cost-sharing and participation based on project location, population served/benefitted, and water quality improvements anticipated are major considerations for selecting watershed-based projects. Ideally, past planning recommendations and input from stakeholders outside of the responsible co-permittees is utilized when selecting and prioritizing projects. If a particular water quality concern and proposed solution is known at the time of drafting the permit, then the project and

schedule would be conditioned in the permit. In the case of the Menomonee MS4 permit, the permit remained flexible by allowing the group time to solicit project ideas from the participating communities and stakeholder group during the permit term. See Appendix 7 (p. 43), "Group Permitting of MS4 Discharges to the Menomonee River" for more information.

Single-Entity Permits

This watershed permitting type bundles a number of formerly independently permitted discharges into a single permit. In this model, a single entity (for example, a multi-jurisdictional basin authority or another umbrella organization) becomes the permit holder and is legally responsible for complying with all terms of the permit. The single entity permit must be issued to an owner or operator pursuant to s. 283.37(1), Wis. Stat., and demonstrate that they have authority to maintain compliance with the requirements of the permit and the discharges covered therein. The single entity covered under this permit replaces existing permittees previously covered under individual permits. Single-entity permit requirements would be oriented toward achieving water quality goals within the boundaries covered by the permit and the permittee would have to ensure that all discharges in the area meet applicable requirements.

For example, this approach could bundle permit requirements within the boundaries of a municipality in the same permit, including wastewater treatment plant outfalls, combined sewer overflows (CSOs), stormwater discharges, etc. The new entity identified as the permit holder would then become responsible for meeting all of the requirements that previously would have been assigned to separate permittees in traditional wastewater and MS4 permits.

A community currently holding several WPDES permits for wastewater, stormwater, and other sources could theoretically apply for a single-entity permit in order to capture cost-savings by consolidating all permit application, issuance, and compliance activities. Single-entity permits might provide the greatest flexibility for permittees that wish to achieve water quality goals by coordinating monitoring, assessment and characterization, prioritization, planning, and/or implementation within the boundaries of their community (or other geographic area covered by the permit). This might enhance the potential for trading between sources within the same community.

This type of permitting has not yet been attempted in Wisconsin, however, it has been done in other states. Examples of where this permit type has been applied, see:

- Oregon: https://wiki.epa.gov/watershed2/index.php/Tualatin_River_Watershed,_Oregon
- Minnesota: http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/basins/minnesota-river-basin/minnesota-river-basin-general-phosphorus-permit-phase-1.html

It is important to note that implementing this single-entity permitting approach in Wisconsin would require much additional thought and discussion amongst permit program managers, staff and stakeholders. A new permit drafting process would need to be created in the System for Wastewater Applications, Monitoring and Permits (SWAMP) database, which could be applied to diverse discharge types with different compliance methods (i.e., wastewater compliance is demonstrated via direct effluent monitoring; stormwater compliance is demonstrated via modeling that shows if BMPs are effective). These types of permits will also need specialized permit applications, fact sheets, and eDMRs (electronic discharge monitoring reports). Compliance and enforcement activities will be complicated and systems in SWAMP will need modification if compliance is to be determined based on data from multiple, diverse discharge types.

Note: Although this watershed permitting type is described in EPA guidance, there are currently no proposed scenarios in Wisconsin where this type of approach would be used. If/when a real-world application for this type of permit is considered, the tools mentioned above and revisions to this guidance would need to be developed to facilitate the use of this permitting type.

Areawide Water Quality Management Plan Amendments

Chapter NR 121, Wis. Adm. Code (http://docs.legis.wisconsin.gov/code/admin_code/nr/100/121), defines an areawide water quality management plan (AWQMP) as a strategy for managing, protecting and enhancing groundwater and surface water quality, while considering the interrelationship of water quality and land and water resources on an areawide basis. Chapter NR 121 sets regulations that specify policies, procedures, and requirements for Wisconsin's AWQMP process. The State's AWQMP is an umbrella under which several different types of planning activities are an element.

Under this authority, the Department has the responsibility to develop a Continuing Planning Process, which is a document that specifies the policies and procedures that the state uses to meet its Clean Water Act goals. Under ch. NR121, there are "designated" areas of the state with designated planning and management agencies. In the designated areas of the state where a designated planning agency exists (there is currently only one – Southeastern Wisconsin Regional Planning Commission), the preparation of sewer service area plans and basin/watershed plans is the responsibility of the designated planning agency.

In areas where no designated planning agency exists, the Department may contract with a local agency or entity to conduct the work but retains the functions and responsibilities of the designated planning agency. In the remaining areas of the state, the department is responsible for preparing sewer service area plans and basin/watershed plans. This planning process is intended to systematically evaluate alternative means of achieving state and federal water quality goals and related standards. This planning process integrates consideration of both the technical measures for water pollution abatement and the

management arrangements necessary for implementing these measures. Public participation is provided for throughout plan development.

Chapter NR 121 requires that the AWQMP include "procedures and mechanisms for plan implementation", such as water quality standards, TMDLs, wasteload allocations (WLAs), WQBELs, wastewater treatment and collection system plans, best management practices for nonpoint sources, procedures for public participation, and other implementation mechanisms which apply to the plan area in question. Section 283.31(3)(e), Wis. Stats., requires that WPDES permits be consistent with the AWQMP.

Any process that involves the attainment of water quality standards or goals would be considered part of the continuous planning process and thus be connected to the AWQMP . Watershed permitting options or other implementation tools could piggyback onto the cycle of monitoring, assessment, and implementation to synchronize implementation activities, facilitate trading and adaptive management, and formalize TMDL implementation plans or other tools that may be used to achieve water quality standards within a given area.

When watershed plans are updated, for example, and formally amended to the AWQMP, the plans could include dates at which all permittees are expected to achieve certain goals. Then, as permits are reissued, permit requirements would be included as recommended in the AWQMP. The AWQMP planning process could also be used to outline how reserve capacity might be allocated within a TMDL area, credit exchanges/brokers might work for trading, new discharges will be accounted for, or other implementation details. Any goals and recommendations in an AWQMP cannot conflict with specific state rules.

Included in the AWQMP process is an opportunity for public hearing and comment (see s. NR 121.08, Wis. Adm. Code). The EPA also reviews AWQMP amendments. Since conditions for compliance with effluent limits and other permit conditions could be recommended in these plans, it will be important for the Department to inform WPDES permittees throughout the planning process. At a minimum, permittees should be notified as the AWQMP amendment is readied for public notice. Permittees will need to be aware of AWQMP recommendations, since they could have permit conditions that are consistent those recommendations in future permit reissuances.

This AWQMP process might have the potential to reduce the workload of Department staff and permittees, if permit conditions can be developed on an areawide basis, rather than on a permit-by-permit basis. Addressing areawide concerns in this manner might also translate into a more equitable approach if everyone's responsibilities are taken into account at the same time and given equal consideration. This way, everyone knows in advance when certain activities will be occurring and can identify opportunities for leveraging and sharing of resources.

For an example of an AWQMP amendment that was used to facilitate permitting throughout a large basin, see Appendix 3, "Areawide Planning in the Lower Fox TMDL Area", p. 35.

III. Where and When to Consider Watershed Permitting

There are a number of factors that should be considered when choosing whether or not to do watershed permitting and which permitting type to use. The size, physical characteristics, and jurisdictional limits of the area being covered will influence the scale and scope of the process. The larger the area, the more complex things like data collection and management, stakeholder involvement, and permitting will be. Managers considering the usefulness of watershed permitting should keep this in mind when deciding if it is an appropriate tool for the given situation.

All of the watershed permitting types discussed in this guidance (Section II, starting on p. 4) may provide better opportunities for coordinated monitoring, planning, and implementation activities across multiple discharges. Areawide planning and permitting may also provide an effective organizing function for stakeholders to focus on programs such as trading or adaptive management and allow for the development of pollutant limits and monitoring frequencies that address the goals of a basin plan or an approved TMDL. A shared permitting cycle might also insure that all permittees know in advance when certain activities will be required and facilitate the identification of opportunities for leveraging and sharing of resources. The type of watershed permitting chosen in every case should take advantage of this potential, while considering the conditions of the geographic area to be covered and the different pollutant sources within that area.

As noted in the introduction, watershed permitting processes are probably best suited for areas where it is believed that they will assure that groundwater or surface water quality goals will be achieved more quickly or effectively than by addressing sources on a discharge-by-discharge basis. This means that pollutants of concern, within the area of concern, have more than just end-of-pipe effects, since localized effects are addressed through the process of applying WQBELs in individual permits. On the other hand, pollutants that have both near-field and far-field concerns may be the best candidates for a watershed permitting approach. For example, the Department could use a facility-specific WQBEL for nutrients to protect the receiving water directly around an outfall, but the fate and transport of nutrients discharged throughout the watershed could still affect a downstream lake. Water quality criteria for nutrients in that lake might be better addressed by dividing up and implementing load reductions throughout the watershed under a watershed permitting approach.

Watershed permitting will likely be most attractive in areas where the integration of monitoring, planning, and/or implementation processes are desirable. This may be true most often in areas where the following implementation activities are anticipated:

- TMDL Development and Implementation — http://dnr.wi.gov/topic/tmdls/ and http://dnr.wi.gov/topic/tmdls/implementation.html
- Water Quality Trading — http://dnr.wi.gov/topic/surfacewater/waterqualitytrading.html
- Adaptive Management — http://dnr.wi.gov/topic/SurfaceWater/AdaptiveManagement.html
- Source Water Protection — http://dnr.wi.gov/topic/drinkingwater/sourcewaterprotection.html
- Other watershed-related projects — http://dnr.wi.gov/topic/watersheds/

TMDL Development and Implementation. In cases where a TMDL has been approved or is being developed, the Department should consider watershed permitting approaches in addition to, or instead of, the use of traditional individual permits to implement the TMDL. Similar information gathering and other actions are necessary for successful TMDL implementation and watershed permitting. Therefore, it is likely that some watershed permitting options will be easier to implement when a TMDL is developed for the area. For example, in order to develop WQBELs for multiple point sources under a group permit, staff have to determine the appropriate distribution of the total available WLA amongst point sources. This process is already completed during TMDL development.

Watershed permitting might be the most effective and efficient way to implement some TMDLs, especially when a permitting strategy can be designed to match the geographic scope of the TMDL and address all facilities for which WLAs were developed. A group permitting approach could be taken to focus on the TMDL pollutant(s) of concern, cover multiple dischargers, and apply in addition to the non-TMDL requirements in existing individual permits. One of the key features of this sort of permitting is that it would allow the WDNR to synchronize the point source side of TMDL implementation - an option that might speed along implementation of the TMDL. This type of permitting could also make it easier to track and determine the success of point source-related TMDL implementation steps (e.g., progress towards achieving the overall WLA and/or establishment of nonpoint source practices under trading or adaptive management projects).

Like many TMDL implementation processes, watershed permitting should be considered and/or planned for during TMDL development, whenever possible. If implementation planning and permitting does not begin until after the TMDL has been approved, the time needed for drafting permits, coordinating internal communications and permit support activities (inspections, compliance determinations, etc.), external outreach, and other steps could cause significant delays and increase permit backlogs.

In limited cases, it might be possible to use a watershed permitting approach instead of developing a TMDL. These circumstances would likely be limited to situations where point sources are the

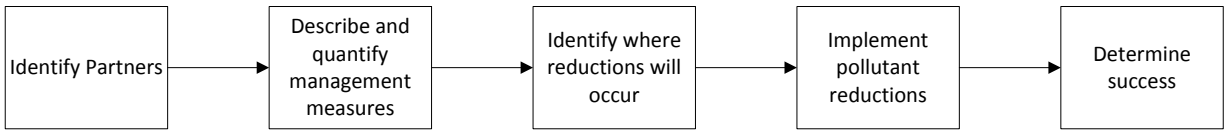
predominant source of the pollutant(s) of concern. For example, the issuance of a group permit (see page 5) might preclude the need for a TMDL in a scenario where there are combined wastewater outfalls, where effluent limit evaluations have to include multiple outfalls in order to protect local or downstream water quality, or where a number of permittees select a shared compliance strategy such as adaptive management or trading.

For more information about TMDL development and implementation go to: http://dnr.wi.gov/topic/tmdls/

Water Quality Trading & Adaptive Management. Trading and adaptive management are compliance options that recognize that pollution can come from a variety of sources and that reductions in both point and nonpoint sources are often needed to achieve water quality goals. These programs are intended to provide an avenue for point sources facing higher pollution control costs to meet their obligations by purchasing environmentally equivalent (or superior) reductions from another source at a lower cost. These options allow creativity and flexibility for point sources to meet water quality standards by working throughout the area of concern with other point sources or with landowners, municipalities, and/or counties to target nonpoint sources of runoff (stormwater, agricultural, or other).

A watershed permitting program could encourage cooperation and collaboration among permittees and other stakeholders, if it were to name all affected point sources, list their effluent limits, specify the conditions needed for trading and/or adaptive management, and bring all of the permittees into a similar compliance timeframe. For example, if everyone had to take similar steps to meet new phosphorus WQBELs at about the same time, a subgroup of those permittees might decide to cooperate on one adaptive management project. Or a couple of permittees might discover that they could work together on a trading deal that would meet both of their needs. (For an example of what a group permit that encourages permittees to consider compliance alternatives at the same time might look like, see Appendix 8, “Wastewater Group Permit Template”, p. 46).

Alternatively, a group permit could be issued after a group of permittees has already decided to do adaptive management or trading together, in order to consolidate the permit requirements that come with these programs into one, shared permit. Either of these options could help permittees to work together to target the most significant pollutant sources and maximize the use of resources to achieve environmental results.



Trading & Adaptive Management options are designed for use when it is economically preferable to control nonpoint sources or other point sources

For more information about Water Quality Trading go to:
http://dnr.wi.gov/topic/surfacewater/waterqualitytrading.html

For more information about Adaptive Management go to:
http://dnr.wi.gov/topic/surfacewater/adaptivemanagement.html

Other Scenarios. At the time this guidance was written, the Department did not envision the wide use of watershed permitting for purposes other than TMDL, trading, or adaptive management implementation. However, there may be circumstances that were not considered by the authors where the use of watershed permitting may be appropriate. If staff or stakeholders believe watershed permitting could be beneficial to their situation, the appropriate WDNR program managers should be contacted to discuss the details. See Section V- Workload, below, for additional detail.

IV. Policy Management Team (PMT) Approval

If staff or stakeholders believe that a situation calls for watershed permitting, then the appropriate WDNR program manager(s) should be contacted to discuss the situation. This is necessary due to the potential impacts to permit program workload and backlog concerns associated with watershed permitting (Section V, p. 15). The appropriate manager(s) to be contacted depends on the area and permittees to be covered by the proposed watershed permitting scenario, the pollutant type, and the permittee types to be covered. For example, if the watershed permitting process being proposed covers a couple of wastewater permittees in a limited geographic area, it is probably appropriate to only contact the district wastewater supervisor assigned to that area. The Wastewater Section chief should also be contacted anytime central office permits are involved. If the proposed project covers several wastewater permittees across more than one district, then it would be appropriate to notify the entire Wastewater Policy Management Team (PMT), which is made up of wastewater supervisors from each of the districts and central office, so that all statewide and cross-program implications can be considered. Likewise, if a project involves stormwater or CAFO permittees, then the local Runoff Management PMT (or the local district's Runoff supervisor) should be contacted.

Additionally, central office staff have been assigned the ongoing responsibility of providing the tools needed for watershed permitting (e.g., updating this guidance and permit language templates) and for tracking where different types of watershed permitting are proposed or are already occurring. These staff should be notified when a new watershed permitting project is being considered:

Kari Fleming
Kari.Fleming@wisconsin.gov
608-267-7663

Amanda Minks
Amanda.Minks@wisconsin.gov
608-264-9223

V. Workload

Some watershed permitting approaches will require a greater investment of Department time and resources than the standard permit-by-permit reissuance approach. Situations where workloads are likely to increase as a result of watershed permitting include:

- Watershed permits, such as group permits, are issued in addition to individual WPDES permits;
- A significant number of permits need to be simultaneously reissued, modified, or revoked/reissued to implement watershed permitting;
- A large number of discharges are covered under the watershed permit;
- The permit language of the watershed permit is complex due to the implementation of adaptive management or water quality trading or other permitting options;
- Multiple inspections, compliance determinations, application reviews, limit calculations, and/or other permit-related activities are needed to implement the watershed permit; and
- Multiple trading, adaptive management, and/or facility construction plans being submitted to WDNR staff at the same time.

These factors may impact the workloads of a variety of staff including wastewater field staff, trading/adaptive management coordinators, water quality monitoring staff, nonpoint source program staff, waterway and wetlands staff, and others.

In the long run, some permit processing time might be saved by reducing the complexity of individual permits and/or combining some permitting steps, such as public notices and hearings. It is likely that the learning curve associated with watershed permitting will become shorter as more staff gain experience with these tools and processes. Additionally, the goals of watershed permitting (e.g., synchronizing compliance, facilitating the implementation of TMDLs, trading, and adaptive management, etc.) may be worthwhile, despite this workload increase.

The factors discussed above should be considered when deciding whether to do watershed permitting, which permitting type is chosen, and at what scale it is applied. Program managers should consider this extra workload potential carefully when determining whether to use watershed permitting.

VI. Scale

Some watershed permitting types, such as permit synchronization and group permits, will be easier to implement and possibly more effective when applied at a smaller scale (e.g., within a subwatershed or TMDL reach). In most cases, writing one permit for multiple dischargers across a large basin would be extremely difficult. Any watershed permitting project that covers a large number of permittees, conditions, or discharge types could be very complex. Implementation of new phosphorus WQBELs, with compliance schedules requiring consideration of construction, trading, and adaptive management options for a large number of permittees, for example, could make for very complicated group permits.

There are several conditions that might occur at individual sites that can complicate the issuance of watershed permits. The more permittees that are to be covered by watershed permitting, the greater the odds that one or more of these issues could hold up permit issuance. For example:

- A planned expansion at a local industry or wastewater treatment plant (WWTP) upgrade could make synchronization of permits or group permits difficult to accomplish.
- Significant compliance or enforcement issues at a single location could bog down the reissuance of group or synchronized permits. If one permittee is in substantial noncompliance, this could delay the issuance of a group permit which includes that permittee.
- Single party appeals or variances could be complicated for a group permit.
- Synchronized compliance schedules that require many permittees to consider WWTP upgrades, trading and adaptive management plans, water quality standards variances, etc., at the same time could create competition for limited consulting, construction, or financial resources.
- The closing of a facility and the reassignment of a WLA from a TMDL could require the termination or modification of a group permit and/or individual permits.

If watershed permitting is desirable over a large area, staff may be better off dividing that area into smaller subwatersheds or TMDL reaches when permitting, or issuing an amendment to the AWQMP so that permits can be issued as they expire (see Section VI, p. 16).

VII. The Watershed Permitting Process

The process used to accomplish watershed permitting can vary from project to project, depending on the needs of the area and the watershed permitting type that is chosen. However, all projects should generally keep to a basic series of steps (Figure 1, p. 18). The first step is to delineate the area of concern and the pollutant(s) of interest. Time will need to be given to collect data on receiving water characteristics and the various sources of the pollutant(s). Then work needs to be done to determine appropriate WLAs, WQBELs, and/or other steps needed to achieve water quality standards. In situations where a TMDL is being developed or has already been approved, these steps will be done as a part of that process. Ideally, if watershed permitting is to be done as a way to improve TMDL implementation, discussions about how this should be done will begin before the TMDL is approved. That way plans can be in place to issue, reissue, or modify permits as soon as possible after the TMDL is completed.

Once the area and permitting type are chosen and information about the appropriate WLAs and/or WQBELs are available, staff can draft permits and supporting documents. If necessary, individual permits are modified to remove requirements related to the pollutant(s) of concern (for example, when a group permit will contain all requirements related to that pollutant). This of course will involve choosing the types of effluent monitoring requirements, necessary compliance schedules, and other pollutant-specific requirements for each facility. In many cases it will be necessary to conduct compliance inspections and review the compliance status of each permittee in order to supply needed information for draft permits.

Once permit documents are complete, they need to be public noticed and opportunities for public hearings addressed, in a similar manner as for other WPDES permits. The exception would be that combined public information meetings or hearings should be held when possible, in order to streamline this step and enhance public participation by increasing and coordinating public involvement in the process. Once public comments are addressed, the permit(s) is/are issued and monitoring and compliance activities begin.

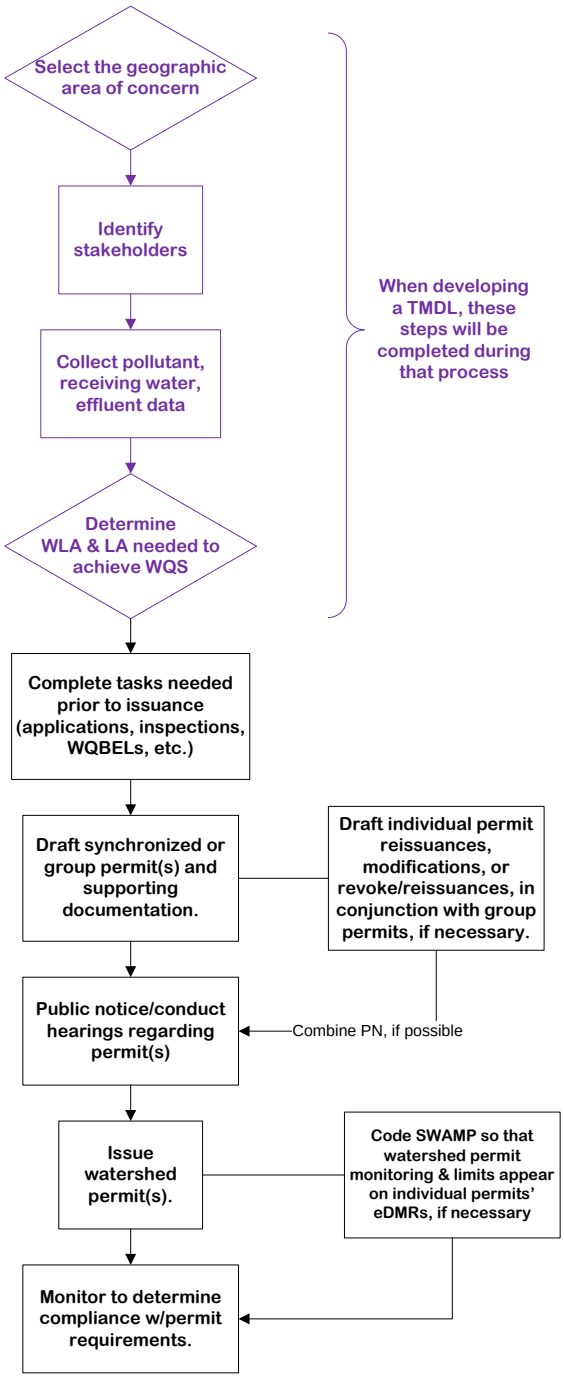


Figure 1. Watershed Permitting Process Flow.

SWAMP Coding. SWAMP program coding is required whenever permits are reissued, modified, or revoked and reissued, in order to create discharge monitoring reports (DMRs) for the permitted facility. When permitting is done using one of the watershed permitting tools described above, normal coding procedures for individual permits may be unaffected (e.g., if synchronizing permits or implementing requirements consistent with a AWQMP amendment) or could be made more complex and require extra staff time and resources (e.g., when issuing a group or single-entity permit). See Section II, p. 14, for more discussion of the different watershed permitting types.

Synchronizing Individual Permits and areawide water quality management plan amendments: When using these watershed permitting types, point sources maintain their individual permits and requirements. Additional SWAMP coding will not be required in these processes, beyond the normal coding requirements for individual permit reissuances.

Group permits: Significant additional coding may be required when creating a new wastewater group permit in SWAMP. It is recommended that group permit documents be created using steps similar to those used to create a general permit document in SWAMP. It is also recommended that the permit be created as a word document and then added to the "documents" tab in SWAMP for each facility covered by the permit. Contact a member of the SWAMP team or see the SWAMP user manual (\\central\water\WQWT_PROJECTS\WY_CW_SWAMP\SWAMP User Manual) for guidance on how to develop a general permit-type document and place it in SWAMP.

To avoid multiple eDMRs in situations where a group wastewater permit is issued in addition to individual permits, limits and monitoring requirements should not be attached to the group permit. Instead, limits and monitoring frequencies should be coded to the individual permit for each covered facility, so that each permittee can report all of their monitoring results (for their individual and group permits) on the same DMR. Careful tracking is needed by the permit drafter to make sure that group and individual permit requirements are coded into SWAMP upon permit reissuance of the individual permit (especially if the expiration dates of individual and group permits are not synchronized). If individual permits are reissued (because they are expired) or modified (in order to remove requirements that will appear in the group permit) at the same time as the group permit is issued, then monitoring and limits from the group permit can be coded into SWAMP at the same time that requirements are coded for the individual permit. If the individual permit has not already expired and is not to be modified, then monitoring and limits from the group permit will need to be coded into the existing permit. Also, note that when entering the monitoring requirements and limits into the existing permit, the end dates must not exceed the permit's expiration date. Requirements must be coded into the existing permit before the last full calendar year before expiration (e.g., if the permit expires on March

31, 2015, requirements must be coded prior to January 1, 2014) or they will have to be re-coded after the individual permit is reissued. Contact the SWAMP team for additional guidance.

If a group permit includes one or more compliance schedules, the requirements from each schedule must be coded into the "event tracker" section of SWAMP for each of the group permit holders. These compliance activities should be attached to each facility's group permit, rather than to each individual permit.

Single-entity permits: As noted above, implementing a single-entity permitting approach would require more discussion amongst permit program managers and staff. A new permit drafting process, documents, event tracker steps, and eDMRs would need to be created in SWAMP, which could be applied to diverse discharge types with different compliance determination methods. The newly named permit holder would need to be added as a new facility in SWAMP. The single-entity permit will require additional thought regarding how best to implement this type of watershed permit including permit application details, SWAMP coding, data entry, and staff resource needs, among other things.

Note: Although this watershed permitting type is described in EPA guidance, there are currently no proposed scenarios in Wisconsin where this type of approach would be used. If/when a real-world application for this type of permit is considered, the tools mentioned above and revisions to this guidance would need to be developed to facilitate the use of this permitting type.

Standard language templates could be created to help streamline the permit drafting process for some of the different watershed permitting types (for example, if the same language is needed for a number of synchronized permits). These templates could be added to a "picklist" in SWAMP, if the workload associated with adding this to SWAMP is expected to be less than the workload associated with adding the language to each permit manually. If standard language or specialized compliance schedule requirements are needed for your watershed permitting project, please contact the SWAMP team for additional help or advice.

What is SWAMP?

SWAMP (System for Wastewater Applications, Monitoring and Permits) is a computer system designed to assist WDNR staff with management of the WPDES program. This system has the ability to:

- generate WPDES permit applications,
- store facility information,
- issue WPDES permits,
- generate monitoring forms,
- store permittee monitoring data and analyze compliance,
- generate/store permit-related documents,
- track compliance events, and
- other functions

VIII. Internal Communication

As mentioned above, program manager(s) should be contacted anytime that watershed permitting is being considered (Section IV, p. 14). This is necessary due to the potential impacts on workload and permit backlogs associated with watershed permitting. Inter-Departmental program coordination and communication, at both the staff and management level, will be critical to the success of any watershed permitting process. For example, if the area to be covered includes wastewater permits drafted in a District (or more than one District) and permits issued by the Wastewater Section in the central office, all affected managers and staff from those work areas should be included in discussions and/or correspondence related to how and when permits will be issued. Obviously, for permitting scenarios where wastewater, stormwater, and/or other permits are to be covered under the same permit (or synchronized permits), it will be important for staff across these programs to communicate effectively with one another, as well.

IX. Public Participation

It will be important to identify affected stakeholders and encourage their participation whenever implementing a watershed permitting process. An open and inclusive process may provide a good venue for raising public awareness about TMDLs, trading, adaptive management, and other management strategies and implementation approaches. In areas where a local group is interested in improving water quality, watershed permitting might provide an effective organizing tool to help stakeholders focus on water quality issues and promote cooperation and collaboration among dischargers and other key stakeholders within the area. Watershed permitting could also facilitate the data collection necessary to pursue point and nonpoint trading or adaptive management projects. It could also result in a significant increase in the amount of available monitoring data if these groups develop monitoring consortiums within the area.

X. Permit Adjudication

The permittee or a third party may adjudicate the terms and conditions of a WPDES permit at the time of permit reissuance or modification pursuant to section 283.63, Wis. Stats. This is true for any individual or group WPDES permit. Section 283.63, Wis. Stats, states that any permit applicant, permittee, or 5 or more persons may secure a review by the department of any permit denial, modification, termination, or revocation and reissuance, the reasonableness of or necessity for any term or condition of any issued, reissued or modified permit, any proposed thermal effluent limitation established under s. 283.17, Wis. Stats, or any water quality based effluent limitation established under s. 283.13 (5), Wis. Stats.

In situations where a group permit has been issued and a single permittee contests a condition in that permit, permit drafers should consult with legal staff as to which provisions are stayed until the challenge is resolved.

XI. Permit Record/Legal File

As with other WPDES permit activities, WDNR staff have the responsibility of keeping a record of decisions and actions taken during the development of watershed permits. Files for watershed permits should be managed the same way as individual permits, according to the WPDES Program Retention and Disposition Authorizations (RDAs). (To see the RDA, staff can go to: http://share.dnr.enterprise.wistate.us/teams/dnr/recsmgmt/SitePages/RDASchedules.aspx, click on 'Water Division', then 'WPDES_Permit_Program_RDA'.) Files should be kept in a manner that allows them to be efficiently retrieved in the event of a public records request, administrative or judicial review, or other records request.

When synchronizing permits, the records for most permit actions will continue to be kept in individual permit files and in SWAMP, just as they would if permits were not being synchronized. Group permits issued in the central office and districts will also be stored in SWAMP. As noted in the "SWAMP Coding" Section VII, p. 18, it is recommended that group permit documents be created as Word documents and then added to the "permit documents" section of SWAMP for each facility covered under the group permit. A single, separate hard copy (paper) file should also be created for group permits, as needed, in order to provide a legal record that reflects permit documents that were developed, public meetings that were held, and any other permit decisions or actions that were taken.

It may be necessary to create a separate project file for other watershed permitting types as well, such as synchronized permitting projects, if it is necessary in order to store public meeting records or other documents that apply to the project as a whole (as opposed to records that are permittee-specific and could be stored in individual permit files).

It is recommended that the legal file for most group permits (or project files for other watershed permitting projects) be kept in the central office, especially if the covered permittees include different discharge types and/or are located in more than one district. If the project includes permittees from one district, it may be more appropriate to keep the legal file in that district office.

According to the WPDES program's RDA, paper files for WPDES permits are kept for at least 10 years before they can be archived or destroyed. Electronic files in SWAMP are permanent, however, data is archived (backed up to disc) and removed from SWAMP after 10 years.

XII. Compliance and Enforcement

Staff need to carefully consider and insure that the process used for determining compliance and enforcement of permits that cover multiple permittees is worked out before permit reissuance. Any enforcement questions should be discussed with legal staff. Compliance and enforcement might be especially complicated for permits that cover more than one discharge type (e.g., a group permit that covers both wastewater and MS4 sources or a single-entity permit that covers multiple source types). Staff should be careful to insure that permits are written so that individual permittees retain their individual responsibility for compliance.

Reporting. When permitting is done using synchronized permits or implementing the recommendations in an AWQMP amendment, normal reporting procedures for individual permits should be unaffected. In those cases, permittees will enter and submit data through the normal eDMR process. Electronic DMR reporting in areas where there are group permits should also remain mostly unaffected, as long as limits and monitoring requirements for group permits are coded onto individual permits' forms (when the group permit is a second permit for the permittee), as recommended above in the "SWAMP Coding" section of this guidance, Section VII, p. 18. When this is done, there will only be one DMR for the permittee to deal with.

Compliance Schedules. When writing permits, staff should remember that compliance schedules must be facility-specific and as short as reasonably possible for the given situation, regardless of the permitting type that is chosen. Staff need to evaluate the need for, and appropriate duration of, the compliance schedule(s) for each permittee and each pollutant separately from one another. Each compliance schedule must meet the following requirements:

- The duration of the compliance schedule should be as short as reasonably possible;
- Compliance schedules must include interim steps and may not allow more than one year between compliance dates; and
- If justified, compliance schedules may extend past the expiration date of the permit only when the permit includes both an interim limit effective upon the permit's expiration date and the final effluent limitation which does not become effective within the permit's term.

There are many factors the Department can consider when determining the appropriate length of a compliance schedule. These can include the stringency of the limit, the length of time the facility has already had to consider compliance options, and the complexity/cost of the compliance options, among others.

Under certain circumstances, the Department can consider the similarities and differences in compliance options for a given facility, for more than one pollutant. If similar compliance options will

likely be used for both pollutants, for example, the Department may wish to coordinate the timing between the two compliance schedules. The most frequent example of this may be related to phosphorus and total suspended solids (TSS) compliance.

When writing permits that cover multiple permittees, it may be desirable to lump as many permittees into similar categories as possible. For example, if several permittees are to be covered by a group permit for phosphorus, it may be desirable to group together permittees that will need extended compliance schedules to meet lower phosphorus limits and permittees that need shorter compliance schedules to meet less stringent limits. This should be done whenever possible, in order to shorten and simplify permit language, as long as staff are careful to insure that compliance schedules are still appropriate in length and conditions for each individual permittee. See Appendix 8 (p. 46), "Wastewater Group Permit Template", for example compliance schedule language in this sort of situation.

Modification of Watershed Permits. Regardless of the watershed permitting type chosen (e.g., synchronized reissuance, group permit, single-entity permit, etc.), circumstances may arise which make it necessary to modify these permit(s). For example, the following scenarios may trigger the need for a watershed permit modification:

- *TMDL Revisions.* If an approved TMDL is revised or updated for any reason, this may cause related group and/or individual permit requirements to be changed. See Section 4.12 of the TMDL-WPDES guidance, titled, "Removing TMDL-derived Limits From Permits" (http://dnr.wi.gov/topic/tmdls/implementation.html).

- *Reallocation of WLA.* In limited cases, it may be appropriate to adjust or reassign individual WLAs to correct allocation errors in a TMDL, to allow discharges and communities to regionalize, or to reassign WLA that becomes available when a facility shuts down or an outfall is terminated. If group and/or individual permit covers a permittee that no longer needs its WLA due to a facility closure, regionalization, or other reason, then the permit(s) may need to be modified to reflect these changes. See Section 4.11 of the TMDL-WPDES guidance, titled, "Reassigning Wasteload Allocations (WLAs)" (http://dnr.wi.gov/topic/tmdls/implementation.html) for more information about reassigning WLAs.

- *New discharges.* A new facility that wishes to discharge into an impaired water or TMDL area would need to come up with offsets equal to their discharge or find WLA (through a trade or reallocation of existing WLA) in order to be granted permission to discharge. Group and/or individual permits might need to be modified in cases where the new discharge is located inside

the geographic area covered by the permit(s), or if an existing permittee that is trading or permanently selling a portion of their WLA is covered by the permit(s).

There are other reasons for WDPES permit modifications (e.g., new or revised water quality criteria, water quality standards variances, permit adjudications, etc.) that could also cause a watershed permit to need modification. In situations where a group wastewater permit is being issued to address all conditions related to a particular pollutant; it might also be necessary to modify the individual permits for each permittee covered by the group permit.

XIII. EPA Guidance Available on Watershed Permitting

Watershed permitting is not a new concept at the federal level and it has been the topic of much discussion and research by EPA for twenty years or more. Their 1994 National Pollutant Discharge Elimination System (NPDES) Watershed Strategy reflects their earliest written support for this approach, with continued backing for it through the Watershed Framework (1996), Effluent Trading in Watersheds Policy (1996), Draft Framework for Watershed Trading (1996), Watershed NPDES Permitting Policy Statement (2003), Watershed NPDES Permitting Implementation Guidance (2003), the Watershed NPDES Permitting Technical Guidance (2007) and most recently the Water Quality Trading Toolkit for Permit Writers (2007).

In each of these documents, EPA promotes the watershed permitting concept. In the 2003 Watershed NPDES Permitting Policy Statement, they state that "the process for developing and issuing NPDES permits on a watershed basis is an important tool in water quality management". EPA has made these resources and others available on their website (http://cfpub.epa.gov/npdes/wqbasedpermitting/wspermitting.cfm) and is supportive of regulators and stakeholders who wish to use watershed permitting in their area.

EPA policies mentioned above clearly support watershed permitting as an effective implementation tool. However, the WDNR needs to ensure that watershed permitting can be implemented while meeting other EPA goals such as maintaining a low permit backlog and completing the required amount of TMDLs each year.

If Wisconsin uses one or all of the watershed permitting tools described above successfully, EPA and WDNR managers may need to work together to promote a more holistic, results-driven approach to water quality management. For example, the goals and timelines for reducing the permit backlog could be revised or made more flexible to fit resource constraints and/or TMDL development timelines in local areas where watershed permitting is thought to be a valuable tool. A short-term permit backlog could

be deemed acceptable in situations where a TMDL is being developed and progress has been demonstrated toward implementing a watershed permitting approach.

Appendix 1. Synchronized Permitting in the Rock River Basin

Synchronizing the reissuance of individual permits is the watershed permitting approach closest to traditional permitting, in that each discharger still only receives its regular individual permit. In this scenario, permits may be reissued, modified, or revoked and reissued so that all permittees are on a similar timeline to achieve compliance with limits for the pollutant(s) of concern. This type of watershed permitting was initiated with individual wastewater permits in the Upper and Lower Rock River basins in 2012 and is continuing at the time that this guidance was written.

A "lumped" WLA was set aside in the Rock River TMDL for general permits, so the permit synchronization effort was used only to address individual permits. General permittees are typically addressed in WDNR TMDLs by setting aside a single WLA which covers all general permittees, collectively. The Rock River TMDL states that facilities covered by general permits that are meeting the terms of their permit are considered to be in compliance with the WLA.

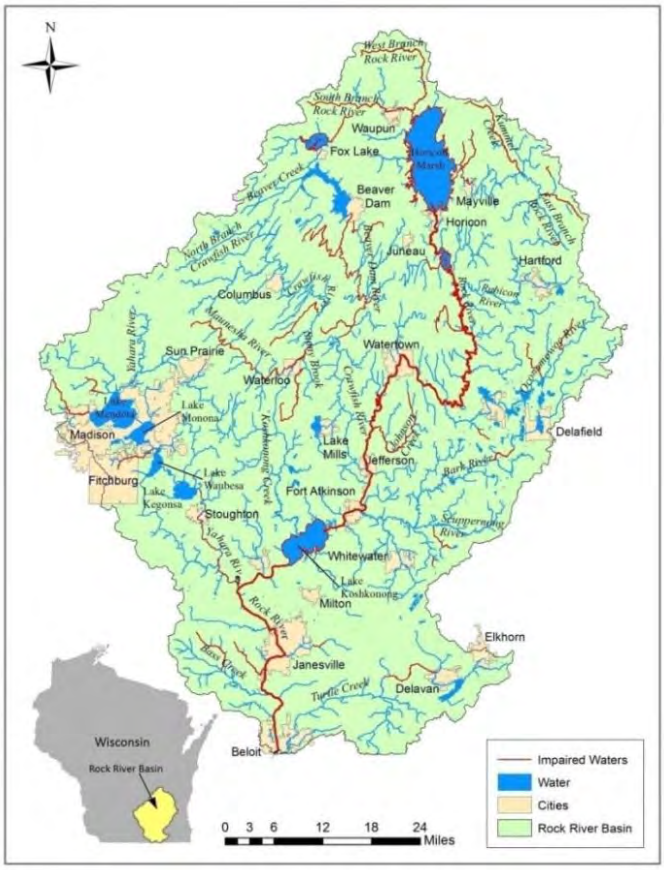


Figure 2. Upper and Lower Rock River Basins.

Background

A TMDL was developed for the Rock River Basin and was approved in September 2011 by EPA. (The link tp Information regarding this TMDL and its implementation can be found here: http://dnr.wi.gov/topic/tmdls/rockriver/.) In order to begin implementation of the TMDL, a team made up of various sector teams was formed to address different aspects of implementation. Doris Thiele, wastewater engineer (doris.thiele@wisconsin.gov; 920-387-7864) was chosen to be the leader of the wastewater sector team, which was responsible for implementing this permitting project. Along with Doris, a number of other staff are pitching in to implement this project, including engineers/specialists and permit drafters from the South and East Districts and staff from the central office.

The 83 industries and municipalities holding specific permits in this basin could have been reissued with the same effective date, however, the workload associated with permitting and public outreach activities for this many dischargers made this approach impractical. Therefore, permits in the Basin were grouped based on their location within the TMDL into groups of 9 – 12 permits which could be reissued concurrently. In the end, the basin was divided into ten groups or "reach-sheds"[1] and staff are working on one group per quarter. As of April 2014, the following facilities were identified in each group:

Table 1. Status of Rock River permit synchronization as of April 2014.

Facility	Permit	Status
Group 1		
ALLENTON SD WWTP	0028053	*
BRANDON	0023442	Issued
BROWNSVILLE	0021601	Public Noticed
BURNETT SD #1 WWTF	0031551	*
GRANDE CHEESE	0050016	#
LEROY KEKOSKEE	0035548	Issued
LOMIRA	0020532	Public Noticed
MAYVILLE WWTF	0024643	Issued
NATIONAL RIVET	0001996	#
SAPUTO CHEESE	0002003	*
THERESA WWTF	0022322	Issued
WAUPUN WWTF	0022772	*
Group 2		
ASHIPPUN SD	0031381	Issued
HARTFORD WPCF	0020192	Issued
HUSTISFORD	0020303	Issued
IRON RIDGE WWTF	0020486	#
LEBANON SD #1	0031364	Public Noticed
LEBANON SD #2 WWTF	0023051	Issued
SLINGER WWTF	0020290	Issued

Facility	Permit	Status
Group 3		
CAMB OAK WWCOMM	0026948	*
CONS KOSH SD	0021059	Issued
DEERFIELD	0023744	Issued
EDGERTON	0020346	Issued
LANDMARK SERVICES	0049379	NPRd
MILTON	0060453	Issued
ROCKDALE	0026352	Issued
SUN PRAIRIE WWTF	0020478	Issued
Group 4		
FORT ATKINSON	0022489	Public Noticed
IXONIA SD #1 WWTF	0031038	#
JEFFERSON WWTF	0024333	*
JOHNSON CREEK	0022161	*
NASCO DIVISION	0058220	Issued
NESTLE PURINA	0002518	Issued
OCONOMOWOC WWTP	0021181	Issued
VALERO (RENEW)	0002038	Public Noticed
WATERTOWN WWTF	0028541	Public Noticed
WI ELECTRIC CONCORD	0061441	Issued
Group 5		
BEAVER DAM	0023345	Public Noticed
COLUMBUS WWTF	0021008	*
FALL RIVER WWTF	0023973	NPRd
LAKE MILLS WWTF	0031194	*
LOWELL WWTF	0029271	*
MARSHALL WWTF	0024627	Issued
RANDOLPH WWTF	0031160	Public Noticed
REESEVILLE WWTF	0028509	*
WATERLOO	0030881	Public Noticed
WI ACADEMY	0029611	Public Noticed
Group 6		
CLYMAN WWTF	0020702	*
HORICON	0020231	Issued
JUNEAU	0021474	Issued
SENECA FOODS - CLYMAN	0002160	#
SENSIENT FLAVORS	0002534	*
Group 7		
ARLINGTON	0021512	#
DANE CO REG AIRPORT	0048747	#
WDNR NEVIN FISH HATCHERY	0002585	#
MADISON G&E BLOUNT	0001961	Issued
MADISON MET WWTF	0024597	*

Facility	Permit	Status
MIDDLETON POND	0049956	#
OREGON	0020681	Public Noticed
STOUGHTON	0020338	Public Noticed
UW MADISON CHARTER	0038296	Public Noticed
Group 8		
DELAFIELD HARTLAND	0032026	
DOUSMAN WWTF	0021351	
GREAT LAKES WWTF	0060607	
LSP WHITEWATER	0049069	
PALMYRA	0031020	
RUSHING WATERS	0002488	
SULLIVAN SD #1 WWTF	0031844	
SULLIVAN WWTF	0025585	
WHITEWATER WWTF	0020001	
Group 9		
BELOIT TOWN WWTF	0026930	
BELOIT WWTF	0023370	
FAIRBANKS MORSE	0002089	
FOOTVILLE WWTF	0024023	
HORMEL FOODS	0025941	
JANESVILLE	0030350	
PLYMOUTH TOWN SD #1	0031054	
RIVERSIDE ENERGY	0061921	Issued
WISCONSIN P&L ROCK	0002402	
Group 10		
CLINTON WWTF	0022039	
PENTAIR WATER INC	0055816	
SHARON WWTF	0022608	
WALCO METRO	0031461	

*Note: In the table above, permits listed with a * means the permit was not expired when staff were working on that group; staff will go back to these, after they expire. Permits listed with a # means the permit was expired, but due to circumstances (e.g., noncompliance, complicated chloride variances, lack of necessary effluent data, or a WQBEL memo was not yet in final form), staff will come back to at a later date.*

[1] Reach-sheds may also be referred to as subwatersheds or segment sheds in TMDL development; a reach is a stream segment or individual lake or reservoir that is assigned a compliance point or "pour point" in a TMDL where the applicable standards must be met. Breaks for stream reaches may be made at changes in impairments (each impaired water must have their own set of TMDLs), changes in water quality criteria, or at points just upstream of significant changes in flow/assimilative capacity.

The plan for this watershed permitting project includes addressing permits one group at a time, starting at the northern end of the basin and generally working towards the southern end, over about a three year period (the last group is projected to be addressed in 2015). Each expired permit is being reissued with a similar set of conditions, related to their Rock River TMDL-based WLAs for phosphorus and total suspended solids (TSS). Compliance schedules for TMDL-related limits for each permittee are being synced as much as possible, given that compliance schedules must be tailored to each permittee, in order to facilitate adaptive management and trading compliance options for those that wish to use them. Permittees in each group are encouraged to pool resources, where possible, and explore joint adaptive management or water quality trading possibilities. Similar compliance timeframes should facilitate partnerships with counties and others. It will be easier for permittees and their partners to target grant monies and other resources on shared projects, than if projects were scattered over time and throughout the basin. Coordinated activities could also result in earlier achievement of measurable water quality improvements.

Outreach

In order to inform permittees and others about what to expect in reissued permits, staff have conducted a range of public meetings over the last two years, as the project moves forward. Meetings conducted to date have included larger basin-wide meetings, permittee "group" meetings (sharing details with each group of permittees as their permits are being drafted), and one-on-one meetings between WDNR staff and permittees. The general approach has been to present an overview of TMDL and permits information at basin-wide meetings, reach-shed scale information at group permittee meetings, and more specific facility information at one-on-one meetings. This way, the permittees hear similar messages more than once and become more knowledgeable, and perhaps more comfortable, with the project over time.

In addition to the outreach described above, public notices, and hearings are being conducted as part of the permit drafting process, except that, where possible, notices and hearings are being combined for permits that are drafted at the same time. The first group of permits was public noticed and a hearing held in June 2013. Six out of nine of those permits were reissued in July 2013; the remaining permits were delayed due to the need for EPA approval for chloride WQC variances and are scheduled to be reissued in 2014. As of April 2014, 24 out of 83 permits have been reissued, with another 13 currently in public notice. Staff continue to conduct public meetings and reissue permits for the remaining permittees.

Permit Backlog

Implementing watershed permitting in the Rock River had a short-term impact on the permit backlog, which was acknowledged and accepted by WDNR and EPA managers in order to allow this project to

move forward. Workload adjustments were necessary to support this effort including realignments of staff time to conduct compliance inspections, complete WQBEL memos, and provide outreach efforts and public meetings for each sequential permit group. Central office staff helped draft WQBEL memos in order to keep the process moving. At the time this guidance was written, the permit backlog in the Rock River Basin is 45%. However, by March 31, 2015, it is anticipated that it will be below 5%, and only six more permits in the Rock will need to be reissued with TMDL-based permit limits.

Benefits

It is believed that permit synchronization in the Rock River will facilitate the use of various compliance options, such as adaptive management and water quality trading, and be beneficial over the long run. Staff have observed that joint permittee meetings and other interactions have encouraged permittees to talk to one another about the potential for mutually beneficial compliance projects and the sharing of limited resources. WDNR staff have also been pulled together in a manner that has led to greater cooperation. Tools such as permit language and WQBEL templates were developed to help streamline permitting activities being done by various staff. Additional benefits may be observed as WDNR staff, permittees, and others, continue to work together to implement the Rock River TMDL.

Lessons Learned

Many of the roadblocks encountered during this project primarily dealt with the timing of the Rock River TMDL. Since the Rock River TMDL was the first large scale TMDL approved in the state of Wisconsin, many of the tools necessary to facilitate implementation were not yet developed or available to staff at the start of this project. TMDL implementation guidance, permit template language, TMDL implementation plans, and other tools were being developed. Future watershed permitting projects will likely encounter fewer delays because tools like these have been developed and are now available for staff use.

Ideally, TMDL implementation plans that address point and nonpoint source concerns in the TMDL area would be completed either during TMDL development or shortly after TMDL approval. Regular communication between wastewater staff, TMDL development and implementation staff, and their supervisors during TMDL development is essential to creating implementable TMDLs and planning ahead for watershed permitting projects. Management and staff support for watershed permitting projects up front in the process will result in successful implementation of the final project.

Planning for watershed permitting during development of the TMDL implementation plan could help streamline the permitting process. Plans could address key permitting decisions such as how to convert TMDL WLAs into permit limits, how to reassign WLAs and/or reserve capacity, how to facilitiate adaptive management and water quality trading, and other topics.

Another potential challenge associated with permit synchronization are permit delays that occur for reasons unrelated to the TMDL. For example, some permits in the Rock River project were delayed due to the processing of water quality standards variances for chloride, ammonia, and other pollutants not addressed by the TMDL. In other cases, delays occurred because more information was needed for permit decision-making purposes, such as updated stream flow information used for thermal determinations. It is recommended that the potential for these types of delays be accounted for when developing a watershed permitting plan and, if possible, staff work with permittees in advance to resolve these issues. Knowing ahead of time whether these sorts of delays could be significant might help WDNR staff and managers decide whether permit synchronization is the right type of watershed permitting for the given situation.

Implementing a watershed permitting approach in a large geographic area can cause workload challenges, as previously mentioned. Implementing a group permit in lieu of permit synchronization, or focusing on a smaller geographic area, might alleviate some of these issues. Issuing a group permit (or series of group permits) could allow for a permit that covers only TMDL parameters, separating that from work related to other issues, such as variances and thermal evaluations. (It should be noted that group permitting was not an option when the Rock River project began, due to a statutory prohibition against issuing more than one permit to POTWs.) Other options that could be considered include creating an amendment to the AWQMP that recommends synchronization of compliance alternatives as permits expire (see Section II, p. 9 for discussion of AWQMP amendments).

Another challenge related to synchronized permitting is how to address unexpired WPDES permits. In the Rock River Basin, permits were not revoked and reissued, or modified in order to synchronize compliance activities. Instead, the amount of time that has elapsed once the permits are reissued could be accounted for in compliance schedules when they are reissued. In this project, the lumping and timing of permit synchronization groups was done to minimize this issue.

Appendix 2. Proposed Synchronized Permitting in Lake Mallalieu TMDL Area

Appendix 1 (p. 27) summarized the large scale, stepwise permit synchronization effort being undertaken in the Upper and Lower Rock River Basins. In the following scenario, synchronized permitting is being proposed on a smaller scale, covering just 5 permittees in the Lake Mallalieu watershed. Lake Mallalieu is a 270-acre eutrophic impoundment near the mouth of the Willow River in St. Croix County. The Willow is a major tributary of the St. Croix River, designated as an Outstanding Resource Water and a National Wild and Scenic River. The confluence is a short distance below the dam forming Lake Mallalieu in Hudson, Wisconsin. A TMDL is being developed to ensure that the 75 ug/L standard is met in all upstream reaches of the Willow (beginning in Polk County) and in Lake Mallalieu. The lake retention time is 5-7 days, so the stream criteria in ch. NR 102, Wis. Adm. Code, applies (instead of lake criteria). The Lake Mallalieu TMDL is a proposed nested TMDL within the St. Croix TMDL watershed, which was approved in 2012.

The phosphorus loading to the Willow is roughly 97% from non-point sources (including the background loading) and 3% from point sources. The five point sources that will be assigned WLAs in the TMDL are listed in the table below, along with the permit expiration dates.

Table 2. Facilities in the Lake Mallalieu TMDL.

Facility Name	Permit Number	Major/Minor	Expiration Date
New Richmond	WI-0021245	Minor Municipal	09/30/2013
Clear Lake	WI-0023639	Minor Municipal	06/30/2014
Deer Park	WI-0025356	Minor Municipal	09/30/2014
Emerald Dairy	WI-0059315	Minor Industrial Treated Discharge at a CAFO	12/31/2014
Lakeside Foods	WI-0002836	Minor Industrial	03/31/2017

Synchronizing permit reissuance in this area may be less complex than for the Rock River TMDL because:

- The geographic area is smaller, with fewer impacted WPDES pemits;
- Fewer staff and supervisors are assigned to potentially affected WPDES permits; and
- 4 of the 5 permit expiration dates are within one year of each other (9/30/2013 to 12/31/14)

Since the TMDL is still under development, a strategy has yet to be finalized to implement TMDL requirements in permits for this area. Discussions are ongoing to determine whether TMDL requirements for these point sources will be similar, and whether watershed permitting may be beneficial. Watershed permitting should be explored in order to make adaptive management, trading, and other cooperative activities easier for permitted facilities.

Appendix 3. Areawide Planning in the Lower Fox TMDL Area

There are over 40 waterbodies in the Lower Fox River basin that are on the 303(d) list of impaired waters, mainly for excessive sediment and phosphorus pollution within the Basin. The Lower Fox TMDL provides a quantitative analysis of the amount of sediment (expressed as Total Suspended Solids or TSS) and/or phosphorus that the waterbodies can receive from both point and nonpoint sources and still meet water quality standards. Restrictive TSS limitations are needed for some discharges in the basin, based on WLAs given in the TMDL.

At the time that this guidance was written, the only TSS-specific implementation procedures are in Act 378, which allows adaptive management to be used as a compliance option for TSS in addition to phosphorus. Other TSS-specific implementation procedures are not yet available in code or statute. Using procedures similar to those provided in phosphorus implementation regulations (ch. NR 217, Wis. Adm. Code) to implement the Lower Fox River TMDL-derived TSS limitations seems logical, because those pollutants were closely linked in that TMDL.

In order to clarify the implementation procedures recommended for TSS in the Lower Fox Basin, an update to the Areawide Water Quality Management Plan (AWQMP) was submitted to EPA for review. This update sought to maximize efficiency to achieve the goals of the Lower Fox TMDL, and streamline facility planning and upgrading decisions from a point source perspective:

> *The Department recognizes the value of attaining water quality standards for phosphorus and total suspended solids (TSS) by applying a common strategy, and understands its role in assisting permittees to comply with permit limits in a cost-effective manner. As such, the Department recommends that WPDES permittees, specifically municipal and industrial wastewater treatment facilities in the Lower Fox River basin, be allowed the option to pursue watershed adaptive management (ch. NR 217, WI Admin Code) in order to achieve compliance with total suspended solids (TSS) effluent limits that are consistent with EPA-approved waste load allocations. The Department also recommends that a compliance schedule for TSS be allowed to extend beyond the term of the WPDES permit, not to exceed 7 to 9 years. Upon permit reissuance, the Department will determine, on a case-by-case basis, the appropriate duration of a TSS compliance schedule depending on several factors including the stringency of the TSS limit, the time needed to comply with the limit, and the time the point source has already had to consider their compliance options, among other factors.*

This AWQMP amendment was proposed to address individual permits, not general permits. General permittees were addressed in the Lower Fox River TMDL by setting aside a single WLA which applies to all general permittees in the TMDL area. The TMDL report states that facilities covered by and meeting the terms of their general permit are considered in compliance with their WLA.

Appendix 4. Proposed NCCW Group Permit for the Milwaukee River TMDL Area

Noncontact cooling water (NCCW) is water used for cooling which does not come into direct contact with any raw material, product, byproduct, or waste. It is typically comprised of a discharge of once-through cooling water for processes such as air compressors, welders, etc. to a surface water of the state. The water does contact plastic or metal piping, and can contain water conditioning additives. The primary concern regarding the discharge of NCCW is usually to ensure that waste heat conveyed to surface waters does not result in violations of water quality standards. Historically, discharges comprised solely of NCCW have been covered under a general permit (WI-0044938). It is estimated that there are over 700 NCCW general permit holders in the state of Wisconsin. The largest concentration of these discharges is believed to be in the Milwaukee River Basin.

There are approximately 130 NCCW general permit holders within the Milwaukee River TMDL area. A TMDL is being developed for this basin to address phosphorus, total suspended solids (TSS), and fecal coliform pollution. At the time of this guidance development, this TMDL is tentatively scheduled to be approved by EPA in Fall 2014. The Milwaukee River TMDL is unique in that the NCCW general permit holders in this basin are being given individual allocations in the TMDL, rather than a lumped allocation like other TMDLs previously approved in Wisconsin. Although NCCW dischargers typically do not add phosphorus to their cooling waters, most NCCW discharges in the Milwaukee area use the city's water supply as source water and discharge the spent water to the nearest storm sewer or outlet. Because the Milwaukee water supply adds polyphosphate (for the purposes of metal sequestration), NCCW discharges are a significant source of anthropogenic phosphorus to surface waters. For these reasons, it is proposed to assign individual allocations to these dischargers in the Milwaukee River Basin.

Assuming that the approved Milwaukee River TMDL will include individual WLAs for each of these dischargers, a new permitting approach will be required for affected NCCWs. This will be necessary because the permit(s) assigned to these dischargers will need to include unique permit limits and compliance schedules for each discharge. Since the TMDL area will be fully allocated to existing dischargers, new discharges will have to be offset by obtaining available WLA or establishing trade agreements with another pollutant source in the basin.

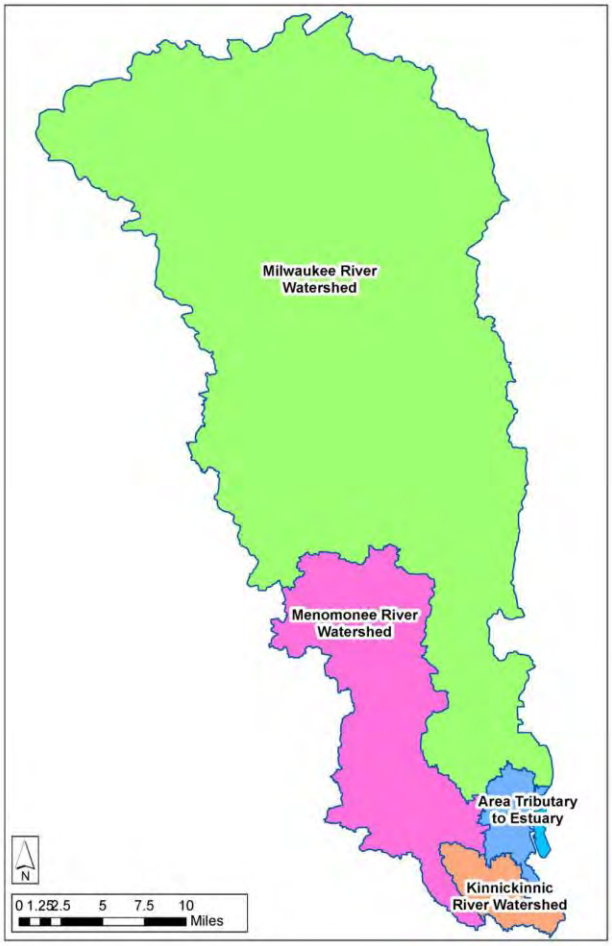


Figure 3. Milwaukee River TMDL Area.

A group permitting approach has been recommended in the Milwaukee River TMDL area because a group permit can be issued to multiple dischargers at once, while still providing the flexibility to implement site-specific permit limitations and other requirements on each discharge. The proposed group permit would replace the existing general permit for these dischargers. Several pieces of information will be needed in order to successfully develop a group permit for NCCWs in this area, including:

- Location information for NCCW discharge;
- Distance and flow path to immediate receiving water
- Effluent data, including: temperature, TSS, and phosphorus data;
- Information regarding the presence/absence of cooling water intake structures; and
- Calculated site-specific TMDL-derived limits

Much of this data was collected and used to propose the individual WLAs in the TMDL, but some of these data still need to be gathered. Additionally, technical details need to be worked out relating to new NCCW discharges that may wish to start discharging in the TMDL area. If this occurs, it may be that the group permit could be modified to cover the new facility, or the facility would need to receive an individual WPDES permit and possibly be added to the group permit the next time it is reissued or modified.

Compared to issuing individual WPDES permits for these 130 facilities, it is believed that this recommended approach would save significant staff time and resources, especially since modifications of existing individual permits would not likely be needed concurrent with issuance of the group permit. It will also help streamline the TMDL implementation process and create a collaborative timeline to consider innovative compliance options.

Appendix 5. Group Permitting of the Green Bay & De Pere POTWs

The Green Bay Metropolitan Sewerage District owns and operates two facilities- the Green Bay Facility and the De Pere Facility. The Green Bay Facility is a regional wastewater treatment facility (WWTF) that serves 16 communities with a combined population of about 176,000. Domestic, commercial, industrial, and truck hauled wastes are received and treated at this site. Advanced secondary treatment is provided by an activated sludge process that is designed to treat 49.2 million gallons per day (MGD) and currently treats about 32 MGD on average. The De Pere Facility is a WWTF that provides service to the City of De Pere and surrounding communities, with a combined population of about 50,000. Domestic, commercial, industrial and truck hauled wastes are received and treated at this location. This facility is designed to treat an annual average flow of 10.0 MGD. Some of the wastewater received at the De Pere Facility is sent via pipeline to the Green Bay Facility for treatment; 1-2 MGD is intermittently transferred to the Green Bay Facility and that system has the capacity to transfer up to 5 MGD. On average, about 7.5 MGD is currently treated at the De Pere Facility.

The Green Bay and De Pere Facilities were previously covered under WPDES Permit No.'s WI-0020991 and WI-0023787, respectively. These permits were not synchronized and had corresponding expiration dates of 09/30/2010 and 03/31/2011. Several regulations became effective since the reissuance of these past permits including temperature water quality standards, phosphorus water quality standards, and the Lower Fox TMDL, which created phosphorus and total suspended solid (TSS) WLAs for these facilities. These regulations require revised phosphorus and TSS limitations be included in these facilities WPDES permits. The Green Bay and De Pere Facilities discharge to the same receiving water- the mainstem of the Lower Fox River- and are within the same TMDL reach (Figure 4, p. 40).

Issuing a group permit to cover both the Green Bay Facility and the De Pere Facility helps streamline the permit reissuance process for WDNR staff, and helps the District come into compliance with these new regulations in the most economically viable manner possible. Specifically, the District can plan for optimizing and/or upgrading the performance of the two facilities collectively, and can better investigate the adaptive management and water quality trading options. The TMDL-derived phosphorus and TSS limits contained in the group permit are based upon the combined WLAs for both facilities. For these reasons, a group WPDES permit was issued on 4/15/14 (effective 7/1/14) to cover both facilities operated by the Green Bay Metropolitan Sewerage District. The permit includes changes that are a result of covering the two WWTFs under a single permit, including changing the sample point numbers for some sample points and modifying the sample point descriptions to identify the facility with which each sample point is associated. The previous permits (WI-0020991 and WI-0023787) were discontinued upon the effective date of the new group permit. A new permit number was created (WI-0065251) for this combined permit, formally entitled "Green Bay Metropolitan Sewerage District Combined" in SWAMP. See SWAMP for specific permit language.

Figure 4. Map of Green Bay Facility and De Pere Facility outfall locations.

Appendix 6. Proposed Group Permit for Whitewater WWTP & LSP Combined Outfall

As noted in this guidance document, the Department does not foresee the widespread use of watershed permitting for purposes other than TMDL, trading, and adaptive management implementation. However, there may be situations where non-TMDL controlled pollutants might be better addressed under a watershed permitting scenario. In the following example, a group permit has been proposed as a means to address whole effluent toxicity (WET), TMDL WLAs, and temperature for two permittees who share a common effluent pipe in Walworth County. This group permit is proposed for reissuance in 2015.

LSP-Whitewater Limited Partnership (also known as the Whitewater Cogeneration Facility) is a combined cycle cogeneration power plant located in Whitewater, Wisconsin. The wastewater from this power plant is treated on site, then combines with the treated effluent from the Whitewater Municipal Wastewater Treatment Plant (WWTP), before discharging to Whitewater Creek from a shared outfall pipe. Limitations and monitoring requirements have been included in the individual WPDES permits for both of these facilities for many years. To date, each facility has been responsible for demonstrating compliance with their individual effluents, but no limitations or monitoring requirements have been assigned in either individual permit for the combined outfall. Each permittee monitors their effluent upstream of the point where the two effluents combine and compliance is determined at those upstream locations.

Recently, a couple of things have occurred which might make it necessary to address the combined outfall in a WPDES permit. The WDNR has been contracting with the UW-Madison State Laboratory of Hygiene's Environmental Toxicology section to conduct WET tests on the individual and combined effluents since 2010. This testing has shown that WET testing should be conducted for the effluent in the combined outfall. Additionally, this shared outfall was assigned joint WLAs for total phosphorus and total suspended solids (TSS) in the Rock River TMDL. (Additional information regarding this TMDL and its implementation can be found on this website: http://dnr.wi.gov/topic/tmdls/rockriver/.) The need for temperature limitations and monitoring to meet thermal water quality standards are also more appropriately assessed on the combined outfall.

It has been proposed that a group permit may be appropriate in this situation to address these parameters in the combined effluent. The group permit would be issued in addition to the individual permits; each permittee would still be responsible for monitoring and compliance of their individual effluents, but they would also have responsibility for compliance with WET, phosphorus, TSS, and thermal requirements at the combined outfall in the group permit. For WET, the group permit may be written to require each permittee take turns testing the combined effluent and then lay out any steps

that would have to be taken in the event that toxicity occurs. Temperature limits and phosphorus and TSS WLAs could be expressed in the group permit in a way that allows the permittees to work cooperatively to achieve compliance with standards in the combined discharge.

The individual permits for the Whitewater WWTP and LSP facilities would have to be reissued, modified, or revoked/reissued to remove requirements for WET, phosphorus, TSS, and thermal, so that these parameters could be wholly covered by a group permit. Staff are proposing to issue a group permit at the same time that the WWTP's individual permit is reissued (since this permit has expired), along with a modification or revoke/reissuance of the LSP permit to remove the appropriate conditions (since the LSP permit expires September 2015).

Appendix 7. Group Permitting of Municipal Separate Storm Sewer System (MS4) Discharges to the Menomonee River

Background - At the time of this guidance, there are 218 municipalities, counties, or special units of government in the state required to have a MS4 permit under subchapter I of NR 216, Wis. Adm. Code. In the eight counties comprising the Department's South District- East, there are 90 permitted entities, including Wisconsin State Fair Park and the Southeastern Wisconsin Professional Baseball District (Miller Park). All permitted MS4's are required through this permit program to develop and implement storm water best management practices to reduce the contribution of pollutants from the MS4 areas to waters of the state. The baseline requirements are referred to as the six minimum control measures: Public Education and Outreach; Public Involvement and Participation; Illicit Discharge Detection and Elimination; Construction Site Pollutant Control; Post-Construction Site Storm Water Management; and Pollution Prevention. To date, the primary geographic scale for planning and implementation was based on the permitted entity's political boundary with focus on meeting the permit requirements individually for their respective MS4 discharge.

General Description - The permit covers all areas within the jurisdiction of the Menomonee River Watershed Permittees, including those areas which do not drain to the Menomonee River Watershed. The permit covers MS4 discharges from 11 municipalities, including City of Brookfield, Village of Butler, Village of Elm Grove, Village of Germantown, City of Greenfield, Village of Menomonee Falls, City of Milwaukee, Milwaukee County, City of West Allis, Village of West Milwaukee, and City of Wauwatosa.

The permit builds from the efforts completed under past individual permits, including the existing Menomonee Group individual permit (WPDES Permit No. WI-S050130-1), and encourages collaboration and promotes shared accountability under a multi-source watershed permit scheme. The Menomonee River Watershed Permittees, through satisfying the permit requirements, will continue to address their own MS4 discharges as appropriate while coordinating as a group to target specific concerns

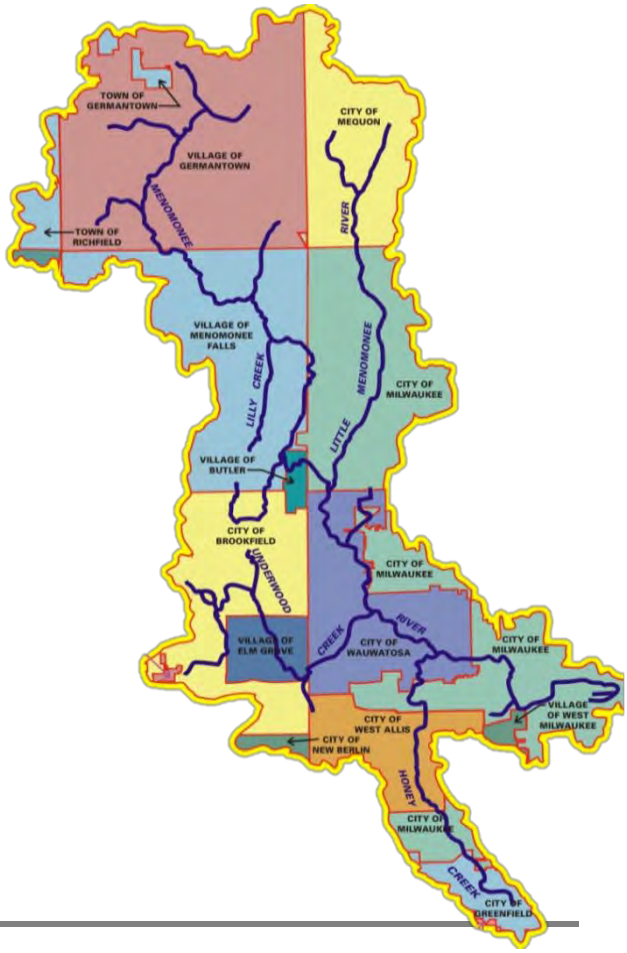


Figure 5. MS4 boundaries in the Menomonee River basin.

identified for the Menomonee River Watershed through past watershed planning efforts. This is primarily achieved through the implementation of a joint analysis procedure for targeting storm sewer outfalls with higher likelihood of having human sewerage inflow and infiltration and direct cross-connections and through the implementation of watershed-based projects as discussed below.

Watershed-Based Permit Structure - The permitted minimum control measures are separated into two groups – Group Conditions and Individual Conditions. Each municipality has commited to contribute to the planning and implementation of programs carried out under group conditions. The group conditions are intended to ensure that efforts in the Menomonee River Watershed are prioritized and implemented in a consistent manner and that a uniform message is being received by the public. Implementation of the group conditions will be conducted on a watershed-based scale. The individual conditions are required to ensure that each municipality is continuing to operate its own unique programs developed under past permit cycles and to address discharges from their own MS4. Implementation of the individual conditions will be on a municipality-based scale.

The Menomonee River Watershed Permittees will also participate in the planning and implementation of Watershed Projects. Participation in these joint projects will provide the permittees with the opportunity to satisfy any number of permit conditions that are addressed by the projects, group and individual, through the successful planning, implementation, and completion of a project depending on the scope of work. The permit requires each municipality to participate in at least one individual or joint watershed project by the end of the five year permit term. The permit specifies the process by which projects are proposed and evaluated. The Department must review and approve the project.

> **Individual Responsibility -** Each permittee is responsible for compliance with the conditions of the permit relating to discharges from those portions of the municipal separate storm sewer system where the municipality is the owner or operator. Each permittee is responsible for participating in group meetings and maintaining an active role in implementing management practices under the group conditions. If a municipality elects to participate in a watershed project, then they must be an active participant in all phases of the project.
>
> **Shared Responsibility -** Group conditions under this permit will be satisfied through the collective efforts put forth by the Menomonee River Watershed Permittees. The permittees may partner with other regulated MS4s or other groups or organizations to satisfy group conditions.

Stakeholder Involvement - The permit was developed as a collaborative effort between municipal representatives; non-governmental organizations; the Southeastern Wisconsin Watersheds Trust, Inc.; the Milwaukee Metropolitan Sewerage District; the Southeastern Wisconsin Regional Planning Commission (SEWRPC); the U.S. Environmental Protection Agency; and the Department. Supporting technical memoranda along with documentation outlining the decision making process for development

of this watershed-based permit can be found on SEWRPC's website at:
http://www.sewrpc.org/SEWRPC/Environment/MenomoneeRiverWBPFramework.htm

Appendix 8. Wastewater Group Permit Template

Group wastewater permitting will likely most often be used in situations where staff want to implement areawide objectives at the same time, without having to reissue every affected permit. For example, rather than having to address phosphorus compliance in numerous individual permits, the limits, monitoring, and compliance schedules (including trading and adaptive management options) could be laid out in a group permit.

The following permit template provides an example that could be used to encourage permittees to consider phosphorus compliance alternatives at about the same time. This template is simply an example. Specific content such as TMDL-based effluent limits, site-specific compliance schedules, standard conditions, etc. should be verified for each group permitting situation prior to use in an actual permit.

NOTE: This is an example group permit. Specific content such as TMDL-based effluent limits should be verified prior to use in an actual permit. Suggestions/guidance for the permit drafter is provided throughout this example in purple text.

WPDES Permit

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

GROUP PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 283, Wisconsin Statutes, the facilities listed in this permit and located in the

NOBLE RIVER WATERSHED

are permitted to discharge

TOTAL PHOSPHORUS

(It is recommended that the group permit cover all pollutants addressed in an EPA-approved TMDL. Further, the permit drafter should consider including in the group permit all effluent limits, both TBELs and WQBELs, for the parameter(s) covered and, when necessary, removing the limits from the individual permits. At a minimum, TMDL-derived WQBELs should be included in the group permit.)

directly to surface waters of the state as identified in this permit in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit.

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Susan L. Sylvester
Director, Water Quality Bureau

_____
Date of Signature

EFFECTIVE DATE: **enter effective date** **EXPIRATION DATE:** **enter expiration date**

EXAMPLE PERMIT

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EXAMPLE PERMIT

1. Group Permit Applicability Criteria

1.1 Facilities Covered

This permit applies to the following facilities and receiving waters.

Facility Name	Individual WPDES Permit No.	Discharge Location
New Honor WWTF	WI- 2222222	Outfall 001 discharges to the Noble River and is located on the River's west bank at approximately two-tenths of a mile east-southeast of the New Honor Wastewater Treatment Facility and one-quarter mile south of Business Highway 64.
Upright WWTF	WI- 3333333	Outfall 001 discharges to the Noble River and is located on the River's north bank at approximately three-tenths of a mile south of the Upright Park Wastewater Treatment System's clarification lagoon and one-quarter mile east of Highway 46.
Village of Noble WWTF	WI - 4444444	Outfall 001 discharges to an unnamed tributary of the Noble River and is located approximately 125 feet east of Peterson Street, which is just east of the Village of Noble Wastewater Treatment Facility, and 135 feet south of 25th Avenue.
Virtuous Energy, Inc.	WI- 5555555	Outfall 001 discharges to Cristal Creek and is located on the Creek's east bank at approximately three-tenths of a mile north of Business Highway 64 and six-tenths of a mile west of Highway 65.

(The receiving water for each outfall must be identified in the above table since a group permit will likely cover more than one receiving water.)

Note: Permittees covered under this group permit must also comply with the terms and conditions of their individual permits identified by permit number in the table above.

1.2 Coverage of Additional Facilities and Permittees

This permit may be modified to add or remove permittees.

EXAMPLE PERMIT

2. Monitoring Requirements and Effluent Limitations

2.1 Sampling Points

Discharges shall be monitored at the following sampling points.

Sampling Point Designation		
Facility	**Sampling Point No.**	**Sampling Point Location**
New Honor WWTF	**001**	Representative effluent samples shall be collected from the effluent pipeline prior to disinfection.
Upright WWTF	**001**	Representative effluent samples shall be collected from the sample tap after disinfection or at the telescoping valve.
Village of Noble WWTF	**001**	Representative samples shall be collected at the head end of the former chlorine contact tank.
Virtuous Energy, Inc.	**001**	Representative effluent samples shall be collected after the final clarifier, but prior to discharge to Crystal Creek.

(Sampling locations should be based on those specified in the individual permits and should clearly identify the point of discharge. If a new sampling point is required for the group permit, the new sampling point will need to be coded into SWAMP for the individual permit to allow DMR generation and submittal.)

2.2 Monitoring Requirements and Effluent Limitations

Facilities covered under this group permit shall comply with the following monitoring requirements and effluent limitations**.**

(If the group permit covers more than one parameter, total suspended solids for example, a separate monitoring and effluent limits table with table-specific footnotes will be necessary for each parameter.)

2.2.1 Total Phosphorus Monitoring Requirements and Interim Effluent Limitations

Facility	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
New Honor WWTF	Monthly Avg.	1.0 mg/L	5/Week	24-hr Flow Prop. Comp.	See Footnote 2.2.3.
	–	lbs/12 months	Monthly	Calculated	See Footnote 2.2.1.1.
Upright WWTF	Monthly Avg.	4.4 mg/L	Quarterly	24-hr Flow Prop. Comp.	See Footnote 2.2.3.
	–	lbs/12 months	Monthly	Calculated	See Footnote 2.2.1.1.
Village of Noble WWTF	Monthly Avg.	1.0 mg/L	3/Week	24-hr Flow Prop. Comp.	See Footnote 2.2.3.
	–	lbs/12 months	Monthly	Calculated	See Footnote 2.2.1.1.

EXAMPLE PERMIT

Facility	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Virtuous Energy, Inc.	Rolling 12 Month Avg.	1.0 mg/L	2/Week	24-hr Flow Prop. Comp.	See Footnote 2.2.3.
	–	lbs/12 months	Monthly	Calculated	See Footnote 2.2.1.1.

(The above table should include all effluent limits that will be in effect upon issuance of the group permit. Effluent limits in this example, with the exception of those for the energy plant, are interim limits that are required as part of a compliance schedule for phosphorus WQBELs. The limits for the Virtuous Energy, Inc. are TBELs. In this example the energy plant's TBELs are more restrictive than the WQBELs derived from the fictitious TMDL.)

2.2.1.1 12-month Rolling Sum of Total Monthly Discharges

The permittee shall calculate and report rolling 12-month sums of total monthly loads for total phosphorus. Total monthly loads should be calculated by multiplying the monthly average discharge concentration (mg/L) by the total flow for the month (MG/month) and by the conversion factor of 8.34. Sum the total monthly loads from the most recent twelve months. Start reporting 12-month rolling sums on the (Enter the twelfth month of the permit's term and the corresponding year. For example, if the permit is effective January 1, 2015, enter "December 2015".) monthly DMR.

(The 12-month rolling sum monitoring requirement is included in the above table as specified by the Department's TMDL implementation guidance to help the Department evaluate compliance with annul WLAs from the approved TMDL.)

2.2.2 Reporting Monitoring Results

Each facility shall report the results of effluent monitoring as specified in the above table(s) on discharge monitoring reports (DMRs) for their individual WPDES permit as identified in Section (enter section that identifies the individual permits).

(Additional coding in SWAMP is required to add columns to the DMRs for individual permits for reporting results of the monitoring required by the group permit.)

2.2.3 Final Water Quality-based Effluent Limitations

Final water quality-based effluent limits are listed in the following table.

(The following table should be expanded to include additional parameters.)

2.2.3.1 Final Water Quality-based Effluent Limitations

Facility	Parameter	Limit Type	Limit and Units	Notes
New Honor WWTF	Phosphorus, Total	Monthly Avg.	5.1 lbs/day	
Upright WWTF	Phosphorus, Total	Monthly Avg.	0.95 lbs/day	
Village of Noble WWTF	Phosphorus, Total	Monthly Avg.	2.8 lbs/day	
Virtuous Energy, Inc.	Phosphorus, Total	Monthly Avg.	0.21 lbs/day	

(For this example group permit, WQBELs in the above table were derived from a fictitious TMDL.)

EXAMPLE PERMIT

Final water quality-based effluent limitations (WQBELs) as presented in the above table become effective in accordance with Schedule of Compliance 3.1 unless:

(A) As part of the application for the next reissuance, or prior to filing the application, the facility submits either: 1.) a watershed adaptive management plan and a completed Watershed Adaptive Management Request Form 3200-139; or 2.) an application for water quality trading; or 3.) an application for a variance; or 4.) new information or additional data that supports a recalculation of the numeric limitation; <u>and</u>

(B) The Department modifies, revokes and reissues, or reissues this permit to incorporate a revised limitation before the expiration of the compliance schedule*.

If Adaptive Management or Water Quality Trading is approved as part of the permit application for the next reissuance or as part of an application for a modification or revocation and reissuance, the plan and specifications submittal, construction, and final effective dates for compliance with the total phosphorus WQBEL may change in the reissued or modified permit. In addition, the numeric value of the water quality-based effluent limit may change based on new information (e.g. a TMDL) or additional data. If a variance is approved for the next reissuance, interim limits and conditions will be imposed in the reissued permit in accordance with s. 283.15, Stats., and applicable regulations. A facility may apply for a variance to the phosphorus WQBEL at the next reissuance even if the facility did not apply for a phosphorus variance as part of this permit reissuance.

If a water quality-based effluent limit has taken effect in a permit, any increase in the limit is subject to s. NR 102.05(1) and ch. NR 207, Wis. Adm. Code.

*Note: The Department will prioritize reissuances and revocations, modifications, and reissuances of permits to allow facilities the opportunity to implement adaptive management or nutrient trading in a timely and effective manner.

Rather than upgrading its wastewater treatment facility to comply with WQBELs for total phosphorus, the facility may use Water Quality Trading or the Watershed Adaptive Management Option, to achieve compliance under ch. NR 217, Wis. Adm. Code, provided that the permit is modified, revoked and reissued, or reissued to incorporate any such alternative approach. The facility may also implement an upgrade to its wastewater treatment facility in combination with Water Quality Trading or the Watershed Adaptive Management Option to achieve compliance, provided that the permit is modified, revoked and reissued, or reissued to incorporate any such alternative approach. If the Final Compliance Alternatives Plan concludes that a variance will be pursued, the Plan shall provide information regarding the basis for the variance.

2.2.4 Application Submittal and Adaptive Management, Pollutant Trading Plan, or Variance Application

The facility shall submit the permit application for the next reissuance at least 6 months prior to expiration of this permit. If the facility intends to pursue adaptive management to achieve compliance with the phosphorus water quality-based effluent limitation, the facility shall submit with the application for the next reissuance: a completed Watershed Adaptive Management Request Form 3200-139, the completed Adaptive Management Plan and final plans for any system upgrades necessary to meet interim limits pursuant to s. NR 217.18, Wis. Adm. Code. If the facility intends to pursue pollutant trading to achieve compliance, the facility shall submit an application for water quality trading with the application for the next reissuance. If system upgrades will be used in combination with pollutant trading to achieve compliance with the final water quality-based limit, the reissued permit will specify a schedule for the necessary upgrades. If the facility intends to seek a variance, the facility shall submit an application for a variance with the application for the next reissuance.

EXAMPLE PERMIT

3. Schedule of Compliance

(The permit drafter will have to determine how many schedules of compliance will be necessary. For example, can more than one parameter be included in the same schedule, or do different facilities need different schedules for the same pollutant? While the permit drafter may identify different interim dates for different facilities within a single compliance schedule, a separate compliance schedule should be used if final dates differ.)

3.1 Final Water Quality-based Effluent Limitations Total Phosphorus

The facility shall comply with the WQBELs for **total phosphorus** as specified in Footnote 2.2.3 of this group permit in accordance with the following schedule except for Virtuous Energy, Inc., which shall comply with the WQBELs for **total phosphorus** as specified in Footnote 2.2.3 upon issuance of this permit.

(The dates of this table should reflect the effective date of the group permit. The steps of the compliance schedule need to be coded in SWAMP for each individual permit as identified in Section 1.1 of this example group permit.)

Required Action	Date Due
Operational Evaluation Report: The permittee shall prepare and submit to the Department for approval an operational evaluation report. The report shall include an evaluation of collected effluent data, possible source reduction measures, operational improvements or other minor facility modifications that will optimize reductions in phosphorus discharges from the treatment plant during the period prior to complying with final phosphorus water quality-based effluent limits (WQBELs) and where possible, enable compliance with final phosphorus WQBELs by 36 months after the date of coverage. The report shall provide a plan and schedule for implementation of the measures, improvements, and modifications as soon as possible, but not later than 36 months after the date of coverage, and state whether the measures, improvements and modifications will enable compliance with final phosphorus WQBELs. Regardless of whether they are expected to result in compliance, the permittee shall implement the measures, improvements, and modifications in accordance with the plan and schedule specified in the operational evaluation report. If the operational evaluation report concludes that the facility can achieve final phosphorus WQBELs using the existing treatment system with only source reduction measures, operational improvements and minor facility modifications, the permittee shall comply with the final phosphorus WQBEL by 36 months after the date of coverage and is not required to comply with the milestones identified below for years 3 through 9 of this compliance schedule ('Preliminary Compliance Alternatives Plan', 'Final Compliance Alternatives Plan', 'Treatment Plant Upgrade to Meet WQBELs', 'Final Plans and Specifications, 'Complete Construction, 'Achieve Compliance').	**Enter a date up to 12 months after permit's effective date.**
Study of Feasible Alternatives: If the Operational Evaluation Report concludes that the permittee cannot achieve final phosphorus WQBELs with source reduction measures, operational improvements and other minor facility modifications, the permittee shall initiate a study of feasible alternatives for meeting final phosphorus WQBELs and comply with the remaining required actions of this schedule of compliance. If the Department disagrees with the conclusion of the report, and determines that the permittee can achieve final phosphorus WQBELs using the existing treatment system with only source	**Enter a date up to 12 months after permit's effective date.**

EXAMPLE PERMIT

Required Action	Date Due
reduction measures, operational improvements, and minor facility modifications, the Department may choose to withdraw general permit coverage and issue an individual permit that includes an implementation schedule for achieving the final phosphorus WQBELs sooner than 108 months after the date of coverage.	
Compliance Alternatives, Source Reduction, Improvements and Modifications Status: The permittee shall submit a 'Compliance Alternatives, Source Reduction, Operational Improvements and Minor Facility Modification' status report to the Department. The report shall provide an update on the permittee's: (1) progress implementing source reduction measures, operational improvements and minor facility modifications to optimize reductions in phosphorus discharges and, to the extent that such measures, improvements and modifications will not enable compliance with the WQBELs, (2) status evaluating feasible alternatives for meeting phosphorus WQBELs.	**Enter a date up to 24 months after permit's effective date.**
Preliminary Compliance Alternatives Plan: The permittee shall submit a preliminary compliance alternatives plan to the Department. If the plan concludes upgrading of the permittee's wastewater treatment facility is necessary to achieve final phosphorus WQBELs, the submittal shall include a preliminary engineering design report. If the plan concludes Adaptive Management will be used, the submittal shall include a completed Watershed Adaptive Management Request form (Form 3200-139) without the Adaptive Management Plan. If water quality trading will be undertaken, the plan must state that trading will be pursued.	**Enter a date up to 36 months after permit's effective date.**
Final Compliance Alternatives Plan: The permittee shall submit a Final Compliance Alternatives Plan to the Department. If the plan concludes upgrading of the permittee's wastewater treatment is necessary to meet final phosphorus WQBELs, the submittal shall include a final engineering design report addressing the treatment plant upgrades, and a facility plan if required pursuant to ch. NR 110, Wis. Adm. Code. If the plan concludes Adaptive Management will be implemented, the submittal shall include a completed Watershed Adaptive Management Request form (Form 3200-139) and an engineering report addressing any treatment system upgrades necessary to meet interim limits pursuant to s. NR 217.18, Wis. Adm. Code. If the plan concludes water quality trading will be used, the submittal shall identify potential trading partners.	**Enter a date up to 48 months after permit's effective date.**
Progress Report on Plans & Specifications: Submit progress report regarding the progress of preparing final plans and specifications.	**Enter a date up to 60 months after permit's effective date.**
Final Plans and Specifications: Unless the permit has been modified, revoked and reissued, or reissued to include Adaptive Management or Water Quality Trading measures or to include a revised schedule based on factors in s. NR 217.17, Wis. Adm. Code, the permittee shall submit final construction plans to the Department for approval pursuant to s. 281.41, Wis. Stats., specifying treatment plant upgrades that must be constructed to achieve compliance with	**Enter a date up to 72 months after permit's effective date.**

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Required Action	Date Due
final phosphorus WQBELs, and a schedule for completing construction of the upgrades by the complete construction date specified in this table, below. (Note: Permit modification, revocation and reissuance is subject to s. 283.53(2), Wis. Stats.)	
Treatment Plant Upgrade to Meet WQBELs: The permittee shall initiate construction of the upgrades. T-he permittee shall obtain approval of the final construction plans and schedule from the Department pursuant to s. 281.41 Wis. Stats. Upon approval of the final construction plans and schedule by the Department pursuant to s. 281.41, Wis. Stats., the permittee shall construct the treatment plant upgrades in accordance with the approved plans and specifications.	**Enter a date up to 75 months after permit's effective date.**
Construction Upgrade Progress Report #1: The permittee shall submit a progress report on construction upgrades.	**Enter a date up to 87 months after permit's effective date.**
Construction Upgrade Progress Report #2: The permittee shall submit a progress report on construction upgrades.	**Enter a date up to 99 months after permit's effective date.**
Complete Construction: The permittee shall complete construction of wastewater treatment system upgrades.	**Enter a date up to 107 months after permit's effective date.**
Achieve Compliance: The permittee shall achieve compliance with final phosphorus WQBELs.	**Enter a date up to 108 months after permit's effective date.**

EXAMPLE PERMIT

(This set of standard requirements covers municipal and industrial dischargers with effluent limits for total phosphorus. A different set of standard requirements may be necessary for a group permit with just municipal or industrial dischargers or for different pollutants. This section does not duplicate standard requirements specified in the individual WPDES permit.)

4. Standard Requirements

NR 205, Wisconsin Administrative Code (Conditions for Industrial Dischargers): The conditions in ss. NR 205.07(1), NR 205.07 (2) for POTW permittees and NR 205.07(3) for non POTW permittees, Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements.

4.1 Reporting and Monitoring Requirements

4.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported by each permittee identified in this group permit on the Department Wastewater Discharge Monitoring Report for the individual WPDES permit as identified in **(enter section that identifies individual permits)**. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a principal executive officer, a ranking elected official or other duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

4.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

4.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

EXAMPLE PERMIT

4.1.4 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.

- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.

- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD_5 and Total Suspended Solids shall be considered to be limits of quantitation.

- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

4.1.5 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application, except for sludge management forms and records, which shall be kept for a period of at least 5 years.

4.1.6 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

4.2 System Operating Requirements

4.2.1 Noncompliance Reporting

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- any noncompliance which may endanger health or the environment;
- any violation of an effluent limitation resulting from an unscheduled bypass;
- any violation of an effluent limitation resulting from an upset; and
- any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department as directed at the end of this permit within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

EXAMPLE PERMIT

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. **The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003**.

4.2.2 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. The wastewater treatment facility shall be under the direct supervision of a state certified operator as required in s. NR 108.06(2), Wis. Adm. Code. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

4.2.3 Duty to Halt or Reduce Activity

For non-POTW permittees, upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative method of treatment is provided.

4.3 Surface Water Requirements

4.3.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

4.3.2 Appropriate Formulas for Effluent Calculations

The permittee shall use the following formulas for calculating effluent results to determine compliance with average concentration limits and mass limits and total load limits:

Weekly/Monthly/Six-Month/Annual Average Concentration = the sum of all daily results for that week/month/six-month/year, divided by the number of results during that time period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Weekly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the week.

Monthly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the month.

Six-Month Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the six-month period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Annual Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the entire year.

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Total Monthly Discharge: = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

Total Annual Discharge: = sum of total monthly discharges for the calendar year.

12-Month Rolling Sum of Total Monthly Discharge: = the sum of the most recent 12 consecutive months of Total Monthly Discharges.

4.3.3 Compliance with Phosphorus Limitation

For non-POTW permittees, compliance with the concentration limitation for phosphorus shall be determined as a rolling twelve-month average and shall be calculated as follows:

First, determine the pounds of phosphorus for an individual month by multiplying the average of all the concentration values for phosphorus (in mg/L) for that month by the total flow for the month in Million Gallons times the conversion factor of 8.34.

Then, the monthly pounds of phosphorus determined in this manner shall be summed for the most recent 12 months and inserted into the numerator of the following equation.

$$\text{Average concentration of P in mg/L} = \frac{\text{Total lbs of P discharged (most recent 12 months)}}{\text{Total flow in MG (most recent 12 months) X 8.34}}$$

The compliance calculation shall be performed each month with a reported discharge volume after substituting data from the most recent month(s) for the oldest month(s). A calculated value in excess of the concentration limitation will be considered equivalent to a violation of a monthly average.

EXAMPLE PERMIT

5. Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Final WQBELs for Total Phosphorus – Operational Evaluation Report		5
Final WQBELs for Total Phosphorus – Study of Feasible Alternatives		5
Final WQBELs for Total Phosphorus – Compliance Alternatives, Source Reduction, Improvements and Modifications Status Report		5
Final WQBELs for Total Phosphorus – Preliminary Compliance Alternatives Plan		5
Final WQBELs for Total Phosphorus – Final Compliance Alternatives Plan		5
Final WQBELs for Total Phosphorus – Progress Report on Plans & Specifications		5
Wastewater Discharge Monitoring Reports	no later than the date indicated on the form	8

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to Northern Region - Spooner, 810 W. Maple Street, Spooner, WI 54801-1255.

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